AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

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Juniperus Chinensis Pfitzeriana

Selection of Broad-leaved Evergreens Breeding Woody Ornamental Plants Excerpts from a Plantsman's Notebook Convention Programs F. R. KILNER, Editor

Editorial

HAPPY NEW YEAR!

Upon concluding a year which has been for most nurserymen the best in a decade, the trade faces the new year with anticipation of a season still more prosperous.

Home building shows no signs of diminishing, and there is expectation that an increase in activity will accompany the defense expenditures of the government and the rise in employment and wages through gains in industry. While many of the homes are of low-cost type, the aggregate of these and the number of better residences to be constructed augurs a strong demand for nursery stock.

In addition, old plantings will be renovated and enhanced as homeowners find their incomes increased. The record volume of sales in all types of stores at Christmas time, if taken as a gauge of public spending, may well forecast a splendid spring for nursery sales.

If the trade takes steps to obtain its share of the public's dollar during this period of ready buying, there is every reason to look forward to a happy new year.

WHAT OF THE FUTURE?

While the coming year promises to be one of increased income and better profits for nurserymen, questions arise in their minds as to the more distant effects of current economic developments. While this country is in a large measure independent of foreign influences, recent experience has taught that events in other parts of the world have repercussions here. Hence one may well wonder what will be the effects of the war abroad, the defense program in this country, the taxes to be levied to pay for it, the employment changes resulting and the dislocations in this country's industry and commerce brought about in consequence.

For the present, curtailment of supplies of some items from abroad is the sole disadvantage of the horticultural industry. There is no early likelihood of damage from military activity or hardship through enlist-

ment of our young men for service in any great numbers. There will be no need in this country to curtail the production of nursery stock in order to grow foodstuffs, as in densely populated European countries. Indeed, the continued demand for ornamental plants in the warring countries, despite curtailment through government influence or decree, suggests continued good business for nurserymen for some time to come.

But after the cessation of the current tremendous demand for war materials and supplies, for nations abroad and for our own defense, what will follow? From the statements of industrial leaders and financial heads of the country, it is apparent that this problem is occupying much of their attention. Probably that is because they have a vivid and close recollection of the problems brought on by the depression. Nurserymen, in particular, know that its effect was far more devastating than that of war.

Whether any device to avoid a later setback can be discovered by economic experts or government master minds remains to be seen. The individual nurseryman, however, can take some steps to prepare. Out of the returns from current good business, he can pay off mortgages, settle all debts and put equipment in first-class order. Then if income is later reduced, expenses can be curtailed to the bare costs of operation and hardships may be prevented.

This might well be a time for more nurserymen to forget the time-honored semiannual or annual settlement dates, and pay invoices as rendered or settle accounts monthly. The closer to a cash basis he achieves now, the less there will be to pay when income is lower. Present prosperity makes it easy to prepare for any later eventuality. It is a time to put one's house in order.

BOOMERANG.

The danger in knocking the other fellow's merchandise should be obvious to anyone in business, though apparently it is often overlooked or ignored.

If the neighborhood nurseryman devotes too much time to telling his prospect why stock from the mailorder firm or agency house will be unsatisfactory, he may discredit himself. There is the strong possibility that the customer may have already bought by mail or through an agent, and if the stock has proved successful, what is the effect of your argument? It is a boomerang.

Once the prospect has reason to question one of your statements, he is skeptical of your other assertions.

Be enthusiastic about the merits of your own stock, and forget the arguments about your competitors'.

LEADING STRAWBERRIES.

Basing the ratings on sales made by nurseries throughout the country during the past year, the American Fruit Grower's planting survey of strawberries reports at the top of the list the strain of Blakemore resistant to the yellow leaf disease, which was discovered through chance by a Tennessee grower, Ralph McUmber, and his foreman, Jesse Needham, among a lot of poorly packed plants damaged by shipment.

The order in which the next ten varieties were rated is as follows: Missionary, Klondike, Howard 17 (Premier), Dunlap (Senator Dunlap), Mastodon, Gem, Dorsett, Aroma, Catskill and Fairfax.

In the early crop region, in the Gulf coast states, the leaders are, in order, Missionary, Klondike, Blakemore (old strain) and Texas.

In the second early crop region, including the Carolinas, Virginia, Tennessee, Arkansas and California, the list is as follows, in order of popularity: Blakemore (yellow resistant), Missionary, Klondike, Aroma, Champion Klondike, Blakemore (old strain), Dorsett and Howard 17 (Premier).

In the intermediate crop region, following is the rank of the varieties: Blakemore (yellows resistant), Howard 17 (Premier), Dorsett, Catskill, Fairfax, Aroma, Chesapeake, Gem, Mastodon and Dunlap (Senator Dunlap). In the late crop region, including New York, Pennsylvania, Ohio, Michigan, Wisconsin, Minnesota, Washington and Oregon, following is the ranking: Dunlap (Senator Dunlap), Howard 17 (Premier), Catskill, Dorsett, Gem, Mastodon, Rockhill and Fairfax.

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CONVENTION TIME

During the next two months over a score of state association conventions will be held, at which many buyers and sellers will meet. While getting your share of that business, remember you can reach 4,500 trade buyers through the advertising columns of this magazine—a good many times the number you or your salesmen can meet at the gatherings you attend. To move stock easily and quickly, don't cut prices—reach out for more customers.

Mail copy for the January 15 issue to reach the publication office by January 10.

Selection of Broad-leaved Evergreens

First of a Series of Articles Similar to Treatment of Narrow-leaved Evergreens and of Woody Deciduous Ornamental Plants in "Compiling a New Nursery List" - By L. C. Chadwick

In two series of articles appearing in the American Nurseryman during some months past, the author has attempted to compile selected lists of woody deciduous ornamentals and narrow-leaved evergreens. The interest and comments received pertaining to these articles indicate that a similar treatment might be undertaken for the woody broad-leaved evergreens.

Most of the discussions dealing with the necessity of a more careful selection of the deciduous plants and of the narrow-leaved evergreens that have appeared previously will apply equally well to the broad-leaved evergreens. Some parts of these discussions will need to be repeated for emphasis and clarity if for no other

There are some conditions prevalent in the production and sale of broadleaved evergreens which make the situation quite distinct from that occurring with the woody deciduous plants and the narrow-leaved evergreens. First, there are not nearly so many plants as compose the two groups of plants discussed previously; second, the broad-leaved evergreens have not been used so extensively in ornamental plantings, and third, the soil and environmental requirements of many of the types are much more exacting than for most plants in the two preceding groups.

The fact that the group of broadleaved evergreens is less extensive than the others might simplify the task of selecting the best types. This does not necessarily hold true, however, because of other complicating factors arising. There is still the necessity of selecting the best and discarding the inferior, and this may be even more difficult with a limited number of plants. The broad-leaved evergreen genera, with a few exceptions, notably rhododendron, do not include extensive lists of varieties and color cultivars. They differ strikingly from the narrow-leaved evergreens in

Except in the south and possibly in some sections of the east, the broadleaved evergreens have not been used extensively. There seems to be a tendency to run somewhat in cycles in

the use of ornamental plants. During the past twenty years the narrowleaved evergreens have replaced deciduous shrubs in many landscape plantings. If satisfactory types can be developed, we may find the broadleaved evergreens replacing many of the narrow-leaved evergreens during the next two decades. If this does not occur, and it not necessarily should, I am confident that we shall find more broad-leaved evergreens used in combination with narrow-leaved evergreens and deciduous shrubs than in the past few years. If this is to be the trend, it gives a good basis for thought on selection of proper types at this time. Perhaps with more thought as to their selection and use, we can avoid some of the poor plantings of deciduous plants and narrowleaved evergreens that now exist.

The limited use of broad-leaved evergreens in many sections in the past has meant limited observations on the satisfaction of their growth under various conditions. We know that some plants, especially those of the ericaceæ family, require an acid, well drained soil containing ample quantities of organic material. However, we do not have any detailed, scientific information on the limits of these requirements. Perhaps some of the rhododendrons will do well in neutral or only slightly acid soil if other growth factors are properly regulated. The amount of exposure and cold which many of the broad-leaved evergreens will tolerate is also shrouded in obscurity. Certainly more experimental evidence is needed on many of the practices now recommended with broad-leaved evergreens, and the further development of testing grounds is highly recommended.

In discussing the selection of broadleaved evergreens, I cannot refrain from mentioning some of the facts stressed previously. Most selections of plant materials should be based on the need for the plants chosen. Unless they have a definite purpose or place to fulfill in the landscape composition, their use can hardly be justified. The best plants correctly used should be the basis for all landscape plantings.

The area to which any one selected

list of broad-leaved evergreens can be applied is more or less limited. Because of the more exacting requirements of the broad-leaved evergreens, the area must of necessity be more restricted than for the woody deciduous ornamentals and the narrowleaved evergreens. The classification of the plants has been based on their satisfaction in Ohio, with more limited observations in several midwestern and eastern states. To make the information more valuable, leading plantsmen in Ohio, Pennsylvania and New Jersey have checked the lists and offered comments. Their suggestions have been considered in the final compilation of the lists. Because of the exacting requirements of many of the broad-leaved evergreens, more information will be given pertaining to them than was previously done with the other two groups of plants. With this information available, the lists can be modified more readily to fit other regions than those mentioned. This attempted selection of the best plants applies, as has been stressed before, more particularly to local landscape gardeners and small growers and retailers who operate a more or less localized business than to wholesale growers and dealers who operate nationally.

Size Groups.

The same size group classification used for the woody deciduous plants and for the narrow-leaved evergreens will be used with the broad-leaved evergreens. These seven size groups start with vines and include, in order, ground covers, dwarf shrubs, small shrubs, medium shrubs, large shrubs and small trees and standard trees. Although somewhat arbitrary, the groups do give a basis for visualizing the size of the plants and for the need and use of the particular plant in a landscape planting. It also enables the selection of the best plants in each group. In some groups there is definitely a lack of good plants. The classification is based mostly on the approximate mature size of the plants. Exceptions must be made, however, in cases where growth is quite slow and plants seldom reach mature size

in landscape plantings. These extreme variations in growth will be noted in discussions of the plants.

Classified Lists.

Three lists are presented: (1) Selected list, (2) secondary list and (3) discard list. The selected list includes the plants which are considered best within the group based on such factors and requirements as durability, hardiness, adaptability and growth, flowering and fruiting characteristics. These factors have been discussed previously in detail and need not be repeated here.

No attempt will be made to include the extensive list of broad-leaved evergreens hardy in the warmer temperate regions of the United States. Rehder in his revised "Manual of Cultivated Trees and Shrubs," published in 1940, gives a map of seven climatic zones of northern North America and gives the average annual minimum temperature of these zones. They are as follows, in degrees Fahrenheit: Zone I, exceeding -50; zone II, -50 to -35; zone III, -35 to -20; zone IV, -20 to -10; zone V, -10 to -5; zone VI, -5 to +5, and zone VII, +5 to +10. The hardiness zones specified by Rehder will be given for the selected plants as they are discussed. While there are other factors besides winter temperature which influence the hardiness of plants, this information should be of some value in determining the adaptability of the plants discussed to one's locality.

Another factor which complicates the selection of the most desirable types is the soil requirement. Certain broad-leaved evergreens positively require an acid soil. In alkaline regions this is quite definitely against listing the plants in the selected list because a satisfactory modification of existing conditions is difficult to obtain and especially to maintain. In acid regions this does not become an important factor. It appears that the best practice to follow in this series of articles is to include in the selected list desirable plants regardless of this specific soil factor, but to mention the requirement in the discussion. Otherwise a considerable number of desirable broad-leaved evergreens might be relegated to the secondary or discard lists. Semievergreen types will be mentioned when the conditions warrant.

The secondary lists include plants which are worthy of limited use or have not been sufficiently tested to

warrant placing elsewhere. Some of these later may prove superior to those on the selected list. The plants in the discard list are those considered to be generally inferior because of growth habit or adaptability to existing conditions. Other types may be similar in foliage, flower and fruit, but possess better growth habit or greater adaptability and consequently are selected in preference to those relegated to the lower classes. A complete discussion of the basis for these three lists has been given in connection with the articles on narrow-leaved evergreens, and readers are referred to them for further information.

The nomenclature used in connection with this series of articles will follow Rehder's revised 1940 edition of the "Manual of Cultivated Trees and Shrubs," with the exception of the use of lower case letters for all specific and varietal names and the dropping of one i where specific or varietal names end in a double i. These two exceptions, it is understood, will be followed in the revised edition of "Standardized Plant Names," soon to be published. Where the plant name used differs decidedly from the one in common use, the old name will be given in parentheses; common names are given only for the plants in the selected list.

Group 1-Vines.

The broad-leaved evergreen vines compose one of our most useful groups of plants. Hardly a landscape planting is executed that does not call for the use of one or more evergreen vines. Their best use is for growing on brick or stone houses, foundation walls, chimneys or other masonry architectural structures.

The list of the woody broad-leaved evergreen vines is not extensive. Only about twenty species and varieties are included. This list is complete with the exception of varieties of the English ivy and a few others not commonly grown in the territory considered in this series of articles.

SELECTED LIST.

Euonymus fortunei (radicans)—Sharpleaf wintercreeper. Euonymus fortunei (radicans) minima—

Baby wintercreeper.
Euonymus fortunei (radicans) vegeta—
Bigleaf wintercreeper.
Hedera helix baltica—Baltic ivy.

SECONDARY LIST.

Akebia quinata. Euonymus fortunei radicans. Hedera helix. Hedera helix gracilis. Hedera helix Hahn's (self-branching) Hedera helix minima. Lonicera japonica halliana.

PLANTS TO DISCARD.

Akebia trifoliata.
Bignonia capreolata.
Bignonia capreolata atrosanguinea.
Hedera colchica.
Hedera helix arborescens.
Hedera helix argenteo-variegata.
Hedera helix conglomerata.
Hedera helix conglomerata.

The selected list of broad-leaved evergreens comprises only two genera and has been limited to four plants. These would appear to be the best of the group. Most plantsmen have been familiar with the specific name Euonymus radicans for the evergreen wintercreeper. The specific name has been changed, however, to Euonymus fortunei.

Euonymus fortunei is a low procumbent shrub, trailing and rooting or climbing by rootlike holdfasts on the stem, in a manner similar to that of English ivy. Because of the variation in growth habit, manifest especially in some of the varieties, the evergreen wintercreepers are used as vines, ground covers and as small bushy plants. Discussion here will pertain primarily to the types suitable as vines. The true species, Euonymus fortunei, is described as having elliptic leaves from one to two inches or a little more in length, with veins slightly raised on the upper side and distinctly prominent veins below. It is indicated as being hardy in zone V. This is the plant which has been commonly offered in the trade as the variety acuta. It is now considered as the true species and the variety acuta is no longer recognized. The species is a good grower and possesses attractive foliage.

Euonymus fortunei minima is a small-leaved form which is more often used as a ground cover or for rockery planting. It is useful, however, as an evergreen vine of slow growth that will grow tightly to the wall. For growing in limited areas, as pockets in a terrace adjoining the facade of the house, it is of value.

Euonymus fortunei vegeta, the bigleaf wintercreeper, is often a bushy variety, but will climb to considerable heights if given some support. The dull green leaves are larger and thicker than the type and nearly round in outline. This variety fruits abundantly. Sometimes climbing to twenty or twenty-five feet or more, it develops a heavy mass of foliage

[Continued on page 18.]

Breeding Woody Ornamental Plants

Commercial Introduction of Better Varieties Through Selection and Hybridization Involves Years of Research, Collection and Trial, as Exemplified in California Nursery — By G. K. Anderson

While no reader need be told the time required to build up a nursery stock of woody plants, when one is working toward selection and hybridization of such plants the years have added weight.

First of all, a great amount of time is consumed in learning where to procure the material which is wanted for such purpose and, after that, to get it. Catalogues from nurseries all over the world must be searched. Trips to other continents are occasionally necessary to secure some plants that are desired. Finally, importations from foreign countries require months instead of weeks.

After the stock or specimen plants are secured, they are often not what was anticipated. But first a season has gone by before this is learned. It takes, in all, from eight to ten years to begin to get results in woody plant breeding, states Walter B. Clarke, San Jose, Cal., whose work in this direction has been notable in recent years.

Another important requirement is a solid background gained by experience in the nursery business and knowledge that comes from watching plants grow. Mr. Clarke had many years of experience with other firms and in business for himself before attempting plant introductions.

As a preliminary to plant breeding in any line, Mr. Clarke attempts to secure every variety available in order to have a complete collection which he can study in order to assess the value of the probable results he may obtain. Only by thus learning what has been done hitherto with a particular genus or species can he determine the relative value of a novelty, since his invariable aim has been to send out only a variety superior to, or different from, what has previously been produced.

Among his importations are a large number of flowering fruit trees. The collection of flowering cherries at San Jose is one of the largest in the country, aside from that of the United States Department of Agriculture and that of the Arnold Arboretum. A wide collection of

Japanese flowering quinces, which have been somewhat neglected in this country, has been gathered from arboretums and other sources until all the available named varieties have been assembled.

Importations of lilacs originated by Lemoine at Nancy, France, include Ami Schott, Diplomate, Etna, Firmament, Marechal Foch, Massena, Monument and Prodige. Selections have been made from a collection of over 200 varieties in the course of twenty years.

A collection of daphnes is being assembled, with the golden-yellow



Lilac Mme. Francisque Morel.

Daphne aurantiaca, from England, included, as well as D. odora and others less known.

One of the collector's items is the New Zealand plant, Gaya Lyallii, whose masses of white blooms, of medium size, are said to be among the most beautiful of such displays.

A dozen plants of Philesia buxifolia, which has received a first-class certificate from the Royal Horticultural Society, were imported.

Alyogyne hakeæfolia is a beautiful newcomer from western Australia among the broad-leaved evergreens. The flowers are large, funnel-shaped and lilac-blue with red throat in color. It blooms profusely and over a long period.

Another novelty is Nerium Oleander Com. Barthelemy, imported from France. The flowers are large, up to three inches wide, double and rich bright red, occasionally streaked white.

Magnolia Campbellii is in such demand that the entire production of this rare tree has been sold a year in advance for the past several years. One tree of this is in Golden Gate park, San Francisco, but has not flowered yet. This is a pure pink. Out of forty or fifty varieties of Oriental magnolias, which are regarded as good, the nursery has probably thirty varieties with which work is being carried on.

Desfontainea spinosa, Chilean flowering holly, is almost always taken for a holly because of its leaves. However, it bears in late summer long showy tubular scarlet and yellow flowers remotely suggesting those of cantua.

Since he started his collections, Mr. Clarke has kept in a loose-leaf book records of all the items which have been imported. Each season entries are made from observation in the nursery. That record is kept in the office safe, with other valuable papers. Leafing the book while sitting at his desk, Mr. Clarke is able to refresh his memory about any plant which has been brought into the nursery for propagation purposes.

Among the specialties of the firm are flowering fruit trees. The Oriental varieties, which make so beautiful a show in the garden in spring, now make up a large collection.

A novelty in flowering peaches, Helen Borchers, somewhat resembles Clara Meyer, but surpasses it in every way. The flowers are unusually large, sometimes two and one-half inches in diameter, although they will not average that. The petals are clear pink, ruffled and incurved. The flowers keep remarkably well when cut and, unlike Clara Meyer, it makes a healthy, vigorous tree.

Aurora, another flowering peach, was sent out in 1937. It has large double flowers of soft pink. It blooms early and vigorously and bears excellent freestone whitefleshed fruit.

Among the novelties in Japanese flowering quinces is Crimson and Gold, whose flowers are somewhat cupped and as large as Blood Red, but a much deeper color, rich velvety red, with a mass of golden stamens. It belongs to the Chænomeles superba group and so the plant is of moderate size. It was originated at the Clarke nursery as a cross between Chænomeles japonica alpina Naranja and Ch. lagenaria sanguinea. Among its other fine qualities, it is an early bloomer.

In the attempt to get a good double white-flowering apricot, the firm has raised several hundred hybridized seedlings. Rosemary Clarke is the name which has been given to a double white which has a rich fragrance. It has long stamens and a red calyx which intensifies the white petals. An erect ruffled apricot has not been named.

For a long time the nursery has been working on weeping apricots. Some were totally single and some just over the line, but finally two full-double pinks were produced.

Over 300 seedlings of quinces are under observation. Cathavensis hybrids, which have now been classified as Chænomeles californica, are the result of crossing Ch. cathayensis onto Ch. superba corallina. The resulting group constitutes a new and entirely distinct class or species. The growth is vigorous, with stout branches well supplied with short laterals. Most of them bloom in extreme profusion, often creating a solid mass of color along the branches for as much as two or three feet with a diameter of six or eight inches. The flowers are large and their colors brilliant. The fruit also is large.

Some of these flowering quinces are much earlier than others which have been observed. These have been flowered for the last three or four years, and plants have been selected for propagation. Five varieties have been named: Rosemary, Sunset Glow, Enchantress, Masterpiece and Mount Everest.

Work on the flowering apricots, so far as the nursery is concerned, is finished. But further work is being done on the flowering crabs.

While the work which Lemoine did

on lilacs has brought him acceptance as the world's greatest breeder of lilacs, there are still a few gaps which can be filled in. This Mr. Clarke hopes to do by raising seedlings and selecting plants grown under California conditions. Many of these crosses are spontaneous, the result of a house full of bees.

Seven separate seedlings of osmanthus were the result of crosses between O. Aquifolium and O. aurantiacus, 4 or 5 years old, though not yet in flower. The foliage on these is particularly beautiful. Not well known yet in California, but sure to become popular, is the small white Osmanthus Delavayi, about which the following statement has been "Compact in habit, it has made: arching branches and small attractive foliage and in the early spring has the largest and possibly the richest scented flowers of any in this genus, which is, of course, noted for its fragrance."

Among the conifers which are outstanding is Chamæcyparis Lawsoniana Elwoodii (Elwood cypress). This is practically a dwarf form of Fletcher cypress. The foliage is entirely juvenile, dainty and pronounced silver in hue. It is suitable for rock gardens and probably prefers shade in sunny climates.

The nursery has about 700 seedlings of Japanese tree peonies, now 4 years old, grown from seeds of the finest named varieties. As Japanese tree peonies are extremely slow to grow into blooming size from seeds, it will be at least two years more before flowers are seen on these.

Among the rare deciduous trees at the nursery is Laburnum Vossii. A small tree with green bark and foliage like exaggerated clover leaves, it has flowers of pure golden-yellow formed exactly like those of Japanese wisteria. The hanging clusters attain as much as eighteen or twenty inches in length and are borne profusely in late spring.

Meratia præcox grandiflora is a large-flowering form of the plant known also as Calycanthus præcox and Chimonanthus fragrans, so admired for its early, intensely fragrant yellow flowers. In California it usually starts to bloom in early December and continues through spring.

Viburnum fragrans, which is stated to be perfectly hardy, comes in a soft pink. In England it is considered superior to V. Carlesii. It makes a shrub of moderate size, bearing intensely fragrant pink flowers in rounded clusters, which appear from November on into spring before the leaves appear.

Viburnum macrocephalum has flowers like the snowball, measuring seven to nine inches in diameter. There is room for more viburnums, states Mr. Clarke.

Included in the large collection of brooms at the nursery are the Sydney B. Mitchell originations. Cytisus Burkwoodii, Burkwood broom, is the best deep red broom he has seen, states Mr. Clarke. The color is solid garnet, with practically no yellow in the flowers, which are borne in long sprays and so placed that they can be seen well. It is a vigorous plant and blooms freely.

Ready in a year or two will be Berberis linearifolia, which is marked by its glossy green foliage. Another interesting item is a native California plant, the yellow-berried toyon, from Catalina island.

Items which will be ready in the future as soon as the nursery is able to work up an adequate stock include: Cedrus atlantica glauca pendula, Thuja orientalis nana gracilis, Aucuba japonica salicifolia, Azara lanceolata, Correa Harrisii, Correa magnifica, Correa ventricosa, Eucryphia Nymansay, Æsculus carnea Briotii, Æsculus indica, Cratægus pubescens, Fraxinus Griffithii, Ceratostigma minus, Corylopsis pauciflora, Dipelta floribunda, Dipelta ventricosa, Magnolia Sargentiana, Magnolia Watsoni, Magnolia Wilsonii, Viburnum betulifolium, Viburnum erubescens, Viburnum grandiflorum, Viburnum tomentosum Lanardii, Lilac Ambassadeur, Lilac Gen. Marceau, Lilac Henri Robert, Lilac Mme. Auguste Gouchault, Lilac President Lebrun, Lilac Rosace, Dioclea glycinoides, Lapageria rosea, Lonicera Tellmanniana, Vitis Davidi, Anigozanthus Manglesii and sixteen varieties of Russell lupines.

As for the future, Mr. Clarke states the nursery has brought in about seventy-five per cent of the most meritorious trees and shrubs that are available abroad, but not in the United States. As rapidly as possible others will be brought in, and from then on it will be necessary

to watch for new things which will be the result of further explorations or of the work of others who are breeding woody plants.

To show for the twenty years' work in hybridization, selection and introduction, the firm has to its credit the woody plants in the list below. The originations are varieties actually developed in the nursery at San Jose, and how the variety occurred, whether a mutant, sport or hybrid, is indicated, as well as the approximate year of origin, introduction occurring later. The introductions are varieties picked up from other sources and named and introduced by the firm in the year noted.

OD		TAT A	TI		
UK	IG.	$LN \Delta$	11	ONS	L

ORIGINATIO	NS.		
Abies Pinsapo nana	(mutant)	1927	
Cedrus Deodara compacta	(mutant)	1928	
Cedrus libani compacta	(mutant)		
Juniperus japonica San Jos		1935	
Retinispora, San Jose	(sport)	1935	
Ilar Aquifolium Colden	(sport)	1733	
Ilex Aquifolium Golden		1025	
Beauty	(mutant)	1933	
Osmanthus hybrid (Aqui-			
folium x aurantiacus)	(hybrid)	1934	
Photinia serrulata nova			
variegata	(sport)	1934	
Pyracantha formosana			
splendens	(mutant)	1925	
Raphiolepis indica rosea	(mutant)	1919	
Apricot, Peggy Clarke	(mutant)	1938	
Apricot, Rosemary Clarke			
Apricot, weeping double	(
pink	(mutant)	1937	
Cherry, Akebono (Day-	(mutant)	1221	
break)	(musans)	1920	
	(mutant)		
Peach, Aurora	(mutant)	1935	
Peach, Blushing Bride	(mutant)	1935	
Peach, Helen Borchers	(mutant)		
Peach, Red Pep	(mutant)	1934	
Peach, weeping double			
pink	(mutant)	1935	
Chænomeles californica			
(group or species) (su-			
	(hybrid)	1937	
Chænomeles alpina			
Naranja	(mutant)	1931	
Chænomeles superba Crim-	,,		
son and Gold	(hybrid)	1937	
		1221	
INTRODUCTIO			
Cotoneaster (conspicua) de		1930	
Photinia arbutifolia chryso	carpa	1936	
Photinia serrulata nova		1927	
Pyracantha hybrid, San Jo	se	1940	
Apricot, Bonita		1933	
Apricot, Charles Abraham		1935	
Apricot, Dawn		1920	
Apricot, early double pink		1922	
Apricot, early double pink Cherry, Beni Hoshi Cherry, Park Weeping		1933	
Cherry Park Weening		1919	
Peach Burbank		1921	
Peach, Burbank Peach, Peppermint Stick		1927	
Peach San Iose Diele			
Peach, San Jose Pink		1929	

PLANTS IN TUBS AND POTS.

Chænomeles superba corallina

Hardenbergia, hardy violet Wisteria floribunda Geisha

Magnolia Soulangeana San Jose

Wisteria floribunda longissima

Wisteria floribunda longissima alba

Wisteria floribunda Royal Purple

1929

1939

1934

1935

1920

1936

Now and then a nurseryman will sell to a club, a hotel or an owner of a large home some plants in tubs or other container for window, entrance or interior decoration. Few in the trade make much effort to get this business, though the possibilities are to be seen in the volume of sales developed in the past seven years by Martin & Overlach Gardens, San Francisco, Cal. Of course, the mild climate makes possible there a far wider assortment of plant materials than could be offered where winter brings freezing weather.

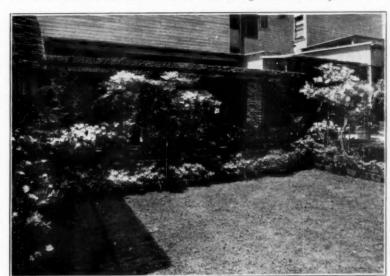
The firm sells large numbers of the tender plants in pots that florists offer for Christmas and Easter, but a wide assortment of other items is selected from nurseries in the state. Because no cut flowers or floral designs are sold, the firm allies itself with nurserymen, rather than with florists.

The possibilities of plants as decorative material in the home led to the

lied upon to build up the business. Actual photographs of plants and pottery displays are reproduced on cards or folders which require a 1-cent stamp. Copy is brief, for the pictures tell the story.

Originally in the downtown retail section, Martin & Overlach Gardens moved closer to the residential district when they found larger quarters on California street.

Their present space of one-half acre includes display room, greenhouse, garden, garage and packing room, all designed for the particular needs of this type of business. The building is set back from the street a few feet, so that outdoor displays may be made. Chartreuse green was chosen for the color of both inside and outside the buildings, as a splendid background for the plants.



Display Outside Quarters of San Francisco Retailer of Potted Plants.

specialization by this firm. The decorative value of plants, their adaptability and their comparative permanence were considered important points. The relation of the plants to the interior decoration of the room or, if for exterior use, to the architectural setting, is stressed.

Containers are important. From the start the firm has had tole and pottery vases made for the shop. Colors and designs are selected not only to set off the plant, but also to harmonize with the settings. Terra cotta handmade pottery, reproduced in this country from Italian models, is in favor because it blends with the stucco of California homes.

Direct-mail advertising has been re-

The main display room, which is approximately 20x50 feet, faces the street and is glassed both front and rear, so that from the street not only can be seen the contents of the store, but also the garden behind. Bamboo screen is used around the sides of the garden in place of lath as more deco-

AMONG the winter short courses to be offered at Massachusetts State College, Amherst, will be an eleven weeks' course for greenkeepers, January 6 to March 15, and a 6-day short course for tree wardens and town foresters, March 24 to 29. Information can be obtained from Roland H. Verbeck, director of short courses.

Plants for Landscape

Recommendations in Use of Shrubs in Talk at Recent Minnesota Convention—By H. J. Reid

Nurserymen are interested in plant materials as merchandise. The result of this is seen in the limited list of kinds usually offered, and the public goes for them on the basis of price. Foliage color and fruit color always appeal to the horticulturist and to the public. Spiræas, honeysuckles and and blue spruces have been played up beyond their merits.

The first thought in selecting plants should be as to location, where plants are to be used, and second as to the value of the color. If the foliage is a red-green, it creates a feeling of warmth; if blue-green, it adds to the effect of distance. The latter can increase the feeling of distance by at least two-thirds.

The planting scheme should be devised to develop its effect over a period of years. Buildings now planned by architects are well proportioned; consequently, homes call for much thought in planning material. A limited use of red barberry will create an accent in the plan, preferable to the wide use of this plant as formerly. Red-twigged dogwood, which is to be condemned for hedges, is effective if used sparingly between Douglas firs or other evergreens. Use cotoneaster as a shrub, for its purple-green foliage is of best effect as a specimen or filler. The alpine currant is good for a similar purpose; the leaves appear early, but it should be kept to its natural form around a modernistic home. One cannot say too much in favor of Evonymus alatus; it is such an ancient plant that, although few are planted, it should be grown much more than it is by nurserymen.

Hydrangeas "Peegee" and arborescens are good, but should be used much farther from the house than they are—the former in particular. It gives a touch of life in the fall. However, it should be planted in groups of three or five to produce the best effect. Hydrangea arborescens dries out too much when planted near the house. Get it farther away, plant in masses and use plenty of water and manure. Lilacs have a place; so do physocarpus and some philadelphus. Persian lilacs have value for their foliage. The Japanese tree lilac

could be planted, one or two of them, between other species. It is graceful and should be used more than at present

A good clean shrub is Viburnum dentatum. It has interesting flowers and foliage; the purple and green of the latter are sufficient to recommend it in any planting, while V. Lantana is, of course, valuable for its fruits.

Few aralias are sold, yet A. spinosa is so unusual in appearance that at least one or two should be included in every collection of shrubs.

Rhus Cotinus stands out above all others when in flower, but it is definitely a shrub to be planted where it can be viewed from a distance.

Refrain from planting Lombardy and Bolleana poplars. Mountain ash and white birch planted in small clumps are much more valuable. Russian olive and buffalo berry are also what might be described as distancemakers. Use more Korean barberry and less philadelphus, while more attention should be paid to the newer rugosa roses. Judicious pruning of the rugosas will keep them in shape and guarantee a plenitude of flowers.

Several of the yews could be included. While it is possible that the blue spruce has been overemphasized, there is no doubt that more Black Hills spruce should be planted. A greater variety of color should be striven for, and those plants which do not have to be seen close at hand in order to be attractive should be included more than is the case at present.

Among perennials, more delphiniums should be used and fewer irises. In lilies the regal and the Madonna make a fine combination. Funkia subcordata is one of the more interesting perennials, especially for late blooming. Peonies could be regarded as dwarf shrubs and planted in groups in front of arbor-vitæ.

New varieties of hemerocallis are coming to the front. They occupy little space and add a welcome touch of color. Some of the newer Oriental poppies could well be used. Aster Frikarti is not only good, but has been found dependable.

There is danger of overplanting the Chinese elm. It may be all right for truck gardens and in a windbreak, but why waste time and money in setting out so many when there is such a wealth of material of greater interest? Not enough white ash is planted, though it is as valuable for prairie planting as any tree could be.

L. S.

PROPOSE WAGE-HOUR BILL.

Enactment of Massachusetts legislation establishing wage and hour regulations for intrastate workers in business and industry similar to those now existing under the federal wagehour act will be sought at the forthcoming session of the Massachusetts legislature. Such a bill was filed December 19 with the clerk of the house by Representatives Lawrence McHugh and Enricco Capucci, of Boston.

The proposed measure would set the minimum wage at 30 cents an hour for the first year, 35 for the next six years and then at 45 cents. The work week would be reduced from forty-four hours for the first year to forty-two for the second and then to forty hours thereafter.

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COLD DAMAGE IN TEXAS.

Responding to inquiries about damage to roses in the nursery from the November cold wave, George F. Verhalen writes from Scottsville, Tex.:

"Our soils are somewhat more clayey and heavier than in some of the other east Texas rose districts, and only a few varieties of less hardy hybrid teas show some damage. The sturdier standard varieties are unhurt. Some of the newer patented kinds, insufficiently tested in the United States before being offered for sale, are nearly wiped out in our test garden.

"Shrubs are unhurt. Junipers and broad-leaved evergreens of all kinds seemed to enjoy the inclement weather.

"So far this season we have had approximately twenty inches more than normal rainfall. It was well placed throughout the summer. Our annual average here near the Louisiana state line is forty-five inches.

"Demand for stock has been quite good so far, and we are looking for a big rush on southwestern sales right after the holidays."

Excerpts from a Plantsman's Notebook

Further Notes on the Culture, Propagation and Uses of Many Kinds of Plants Given Garden Trial in Years Past - By C. W. Wood

Alchemilla Alpina.

(December 9, 1940.) The books mention thirty or more species of alchemilla, most of which are confined to Central and South America and are, therefore, of no use to the grower of hardy plants. Few of the hardy kinds that I have grown are exciting, either. None has shown flowers and, although all have pretty foliage, "palmately lobed or com-pound" in the language of the botanist, not more than two that I know have attracted the attention of customers to the point of buying. One of them, A. alpina, is a dear little thing, with 5-lobed to 7-lobed leaves, silky above and silvery beneath, and a general appearance of delicacy which is not borne out by its behavior. In the garden it does well in a gritty soil in sun or light shade, and it is especially lovely in small clusters along a path or in the alpine lawn, the latter being a phase of gardening that is now coming into vogue. I have had a tall all-green plant under this name, which indicates that some confusion exists. The true plant may be told by its silky, silvery leaves, usually 7-lobed, and low stature. It is easily propagated from seeds.

Cyananthus.

(December 9, 1940.) A correspondent, who has received seeds of several species of cyananthus, complains that he has never seen the genus mentioned in this column and wonders if it is worth growing. The reply is repeated here for the benefit of others who may be interested in these plants.

Cyananthus is most decidedly worth growing if you can do it. As to their worth, all that need be said is that they carry on the task of campanulas (they are, in fact, of the campanula family) into late summer and autumn, after the latter have mostly spent themselves. In trials here in northern Michigan they have resented pot culture in their later stages and, as they resent even more our dry summers, they have given a poor account of themselves under garden culture. Judging from

several trials, I should say that, in this climate at least, they require part shade, a moisture-retentive soil, perhaps on the acid side, and good drainage. A compost of gravel and peat, watered from below, gave good results. As they are seldom available in this country, space need not be taken to enumerate the different All except C. Delavayi, which is a biennial, and the annual C. Hookeri may be grown from cuttings, taken in late spring and rooted in a close frame in sand and leaf mold. Cuttings taken in summer seldom succeed. And, of course, all may be grown from seeds. They should be handled in pots while young or transplanted when they are small, for they resent disturbance in their later stages.

Sorghastrum Nutans.

(September 18, 1940.) The interest which is being shown in grasses as ornamental plants should give impetus to the culture of Indian grass, Sorghastrum nutans, a beautiful native of dry places from Maine southward and west to the Rockies. Why the plant has never received more attention from gardeners is a mystery, because a well grown specimen, which should be four or five feet tall, is quite spectacular when it shoots up a foot-long panicle, beautifully decorated with many golden hairs and yellow anthers. Later the panicle turns to rich bronzy brown, giving it another period of beauty. Perhaps it is not a plant for the more formal parts of the home grounds, but it surely has a place in the wild garden and on dry slopes.

Isatis Glauca.

(December 9, 1940.) I was not a little pleased to see Ernest Ladhams' recommendation of Isatis glauca in his recent notes on "Newer Perennials from Seeds," in the American Nurseryman of December 1, for I have long enjoyed its lax racemes of yellow flowers, always on hand for Memorial day here. Although it is more or less monocarpic as it behaves in this garden, that is little drawback as a garden plant, because it always selfsows, sometimes too freely. It has, in fact, many things in its favor, including the ability to get along on little moisture and the habit of producing a pretty shade of flowers early in the season, making it a good garden plant as well as

a cutting item.

I notice that Ladhams says it "is the plant from which it is reputed the old British dye called woad is extracted." That can scarcely be true, however, for Isatis glauca is a Persian species, not introduced to England until long after woad was a part of the domestic economy of the island. The books, including Henslow's "The Uses of British Plants," give that honor to the European species, I. tinctoria, and "Caesar relates that the ancient Britons used the woad for staining their bodies." This does not add to or detract from the value of the plant as a garden ornament, nor does it need any recommendation from the ancients on that score, but it should be noted in the interest of accuracy.

Linum Hirsutum.

(August 19, 1935.) The littleknown Linum hirsutum has intrigued me not a little during the past two years, not alone for its rareness in gardens, but also because of the unusual beauty of its hairy leaves and long flowering season. The only references found in its brief literature say that it grows naturally in Asia Minor and in Austria, with no known stations between these two extremes, an unusual occurrence in Eurasian plants. In a race of plants with generally glabrous leaves, it is also remarkable for its hairy foliage. In fact, it was that character which first attracted me to the plant and led to a quiet hunt for seeds. Now that I have found them, I am not sure that the plant will please plant growers, for it is not always easy to get the hairy seedlings through their delicate youth.

When that is accomplished, however, the plant offers no cultural problems, doing well in any sunny well drained spot. And for a long time (close to three months here)

it produces a succession of lilac-blue flowers, an inch or more in diameter and borne erect and tight against the woody stems. The leaves, a lovely gray green and hairy on both sides, make a pretty background for the blooms. Seeds, which are produced freely, germinate with ease, and the resulting seedlings, after they pass the damping-off stage, are not hard to handle. I suspect that an annual cutting back, perhaps taking half of the 15-inch stem, would help to make the plant long-lived.

Lupinus Moerheim Orange.

(July 30, 1940.) If your soil and climate suit Lupinus polyphyllus, or what passes as that species in gardens, you will be interested in the new variety, Moerheim Orange. As you no doubt know, most of your oranges and yellows heretofore have lacked typical polyphyllus characters, resembling more the tree lupine in growth habits. In Moerheim Orange, we have one with beautiful orange flowers on real polyphyllus plants. And that is some accomplishment, if I know lupines. In one trial here, about forty per cent came true to color, which is not bad in named varieties.

Some Perennial Helichrysums.

(December 9, 1940.) The helichrysums, best known in gardens in the form of the annual everlastings, contain much good garden material among their perennial kinds. Although not many (none of the Australian or Tasmanian species) are hardy in the open this far north, several from Asia Minor, including the woolly H. anatolicum and H. arenarium, are entirely so and thus are quite desirable garden companions, not only because of their lovely foliage, but also for the ingratiating habit of flowering in summer. The hardy kinds, which include H. lanatum and H. niveum in addition to the ones named above, should make good items for the neighborhood grower, being unusual in American trade as well as being attractive at all seasons.

What I really had in mind, however, when this note was started was the Corsican species, H. frigidum. It is a curiously beautiful plant, not hardy in my climate and too difficult, I imagine, for the average gardener, but worthy of the care it would take to make it thrive. That,

at least, is my opinion after growing it in pots, where its pretty, glistening white, everlasting flowers on 2-inch stems, over mats of gray foliage, made one of the loveliest pictures in a frame devoted to that class of plants. In the open, where hardy, it is said to require a gritty soil, full sunshine and water from below. Even if you have no call for plants like H. frigidum, you are sure to find the preceding ones mentioned of value in rounding out your list.

Dianthus Chabaud Hybrid.

(December 9, 1940.) After another year with Dianthus Heddewigii Chabaud Hybrid I am more at a loss to know what to say about it than I was in 1939, when I gave a preliminary report in this column. That it possesses much garden value is apparent from my trials, and it is equally obvious that its usefulness will vary in different parts of the country and with the needs and desires of gardeners. This far north it is perhaps best treated as an annual, though it did show an inclination to live through the winter, in about the same proportion that D. Heddewigii does. Although the latter is usually considered an annual, it often blooms two or three years here before it succumbs, and the hybrid seems to possess the same trait. Be that as it may, the plant blooms so quickly from seeds (within three months) that treatment as an annual will probably be preferred.

Reputedly a double flower, it has not been fully double here unless the soil was rich and moisture abundant; when neglected, it was really semidouble. In either case the flowers were large (two to three inches across) and in various shades of pink, from salmon to rose and nearly always with a reddish center. Its height of a foot or slightly more makes it a good cutting item as well as a good bedding plant. Neighborhood growers will no doubt find it useful. It is worth a trial, at least.

Carnation J. M. Bridgeford.

(December 8, 1940.) Speaking of pinks reminds me of the new annual carnation, J. M. Bridgeford, which I had from England year before last. Of about the same hardiness as the Chabaud strain, which means that it is too tender for northern winters, its flowers are the largest of the annual carnations with which I am

familiar, rivaling the best greenhouse product in that respect, and the colors are both pleasing and various. Unfortunately, it has the abominable habit of calyx splitting and to a greater degree than most of the annuals. Notwithstanding that fault, it will surely serve you well, attracting favorable attention by its size alone.

Saponaria Ocymoides Alba.

(December 9, 1940.) It cannot be denied that Saponaria ocymoides is one of the best of the plants which were brought into general use by rock gardeners. And it should not be overlooked that a rock garden is not necessary for its comfort. There are sure to be some gardeners among your customers who will, however, object to the flower color of the type, and to them you should be able to show the white variety, alba. In fact, alba has qualities other than flower color which will recommend it to gardeners who do not like the far-flung growths of the type.

The greatest apparent difference between the two plants is in flower color, the rose pink of the type (incidentally, there is not a little choice possible in the clearness of the rosy hue of the type) being changed to a spotless white in alba. The green leaf of the latter, instead of the purplish-tinged ones of the ordinary kind, and the pale green stems which replace the reddish ones of the type also set the plants apart to the experienced eye. Aside from the difference in flower color, however, the most obvious dissimilarity is in growth habits, the rampageous character of the type being replaced by a most restrained growth in the white form. In fact, it is so lacking in vigor that its weak stems, which are seldom over six or eight inches in length, have given it the name of being difficult to handle in some quarters. That may be true on heavy soil or in moist climates, but it is not noticeable on well drained soil in the middle west. It comes true from seeds and may also be grown from cuttings.

A BRICK building for Damon's new Sierra Madre Nursery is being erected on Sierra Madre boulevard, Sierra Madre, Cal. An entire front of glass and a flagged patio, with a center fountain, are to be features.

Plant Shippers' View of Quarantines

Barriers to Interstate Shipment of Nursery Stock in the Form of Quarantines and Inspection Requirements Discussed before Convention of Scientists — By Lee McClain and R. P. White

It is recognized that proper and adequate inspection of nurseries is necessary and that this service to the public costs money. It is maintained, however, that the necessary funds should not be raised by a system imposing a second fee on interstate shipments. The service is in the public welfare. It should be entirely supported by public funds. The financial burden should fall on the states being protected, not upon the business units engaged in interstate commerce. Such a fee system is discrimination against interstate commerce. Protection of a state's agriculture and horticulture from pest invasions is admittedly a great public service. It should be supported, I repeat, and adequately supported, by public funds, not from discriminatory taxes on interstate trade.

The nonuniformity of state requirements in the matter of dealers' and agents' fees, registration and filing fees, bonds, duplicate invoices, special state tags and special commodity tags and permits makes it extremely difficult and costly for an interstate shipper to know all the necessary requirements of each of the forty-eight states and meet them without error—and the penalty for error may be revocation of license, excessive and confiscatory destination inspection fees, or confiscation of his property without redress.

We are of the firm conviction that all fees levied against interstate shipments of nursery stock either directly or indirectly are a burden on interstate commerce and as such are discriminatory, and consequently unconstitutional.

We feel that requirements for duplicate invoices and special state tags are requirements not necessary to the control or prevention of pests and should be eliminated by all states which now make these requirements.

The National Plant Board in its meeting at New Orleans September 15 and 16, 1938, recommended to the regional plant boards that fees levied on out-of-state nurserymen and agents be eliminated and that duplicate invoice requirements be abolished. In 1938 the Southern

In a symposium on plant quarantines as barriers to interstate trade, state regulatory officials, federal officials and nurserymen presented their views, December 30, at Philadelphia, during the annual meeting of the American Phytopathological Society in a joint session with the American Association of Economic Entomologists. The nurserymen's point of view was presented by Lee McClain, Knoxville, Tenn., and Richard P. White, Washington, D. C., respectively chairman of the trade barriers committee and the executive secretary of the American Association of Nurserymen. Preceded by a detailed and lengthy outline of the ways in which plant quarantines and state inspection regulations affect nurserymen's shipments and their business, the final portion of the address, published here, proposed solution to the problem.

Plant Board recommended to its constituent states, where the two-tag system is most in vogue, the development of some plan or procedure, whereby the two-tag system can be eliminated. The Central Plant Board also in 1938 went on record as being "opposed to any plan which will necessitate more than one state tag being placed on any shipment of nursery stock" and further recorded that they were "opposed to charging fees or the selling of tags to out-state nurserymen."

Consideration must be given to the shipper of quarantined goods if and when a quarantine causes him direct financial loss. It is assumed that all quarantines and regulations governing the movement of plants and plant products are in the public welfare, and being in the public welfare, the public should bear the burden. However, as always happens when a quarantine is imposed, the producer of the plant quarantined against takes the licking. His year's crop is embargoed. Instead of a nationwide market, he has a local market out of which he cannot go. His investment in the crop, accumulated charges over a period of years, is heavy, and yet his market has been summarily removed. This is not a just procedure, and provision should be made for reimbursement for plants or plant products confiscated either directly or indirectly, as a result of quarantine action.

How can the desired simplification and uniformity of quarantines and inspection procedures be accomplished? Various suggestions have been made in the past. Federal legislation has often been proposed.

After an exhaustive classical study of the situation as it pertains strictly to state quarantines, a California committee closed its report with the following paragraph:

"The committee believes it would be desirable for Congress to enact legislation providing that interstate quarantines promulgated by states be subject to review and possible disapproval by the federal Secretary of Agriculture. This would prevent retaliatory, unfair or otherwise unjustifiable state quarantines, which are likely to cause trouble in the future."

It is our belief, however, that the focusing of the spotlight of public opinion on such plant quarantines as are retaliatory in nature, not based on sound scientific principles and acting as unjustified impediments to interstate commerce will lead to the same result. With an enlightened corps of public officials administering the plant pest acts of the various states, if adequately implemented with funds, we believe they themselves are capable of working out their own destiny.

It is imperative, however, that state regulatory officials, without delay, examine all interstate quarantines and embargoes and clean their own house. The attorney general of the United States has stated without qualification: "Under our constitutional system today, trade among the states may be embargoed, restricted, or regulated by any state in only two articles of commerce. These articles are intoxicating liquors and prisonmade goods."

In the matter of plant inspection requirements, here again federal legislation and control have been recommended, but again as interstate plant shippers, we have every confidence in the ability of state regulatory officials, individually and as organized in regional and national plant boards to work out this problem in a way which will be satisfactory to the shipper, and

which at the same time will not jeopardize the pest control or prevention programs of the respective states. Again, however, let me emphasize that there is no time to lose in getting a cleansing program underway. Remember that the Constitution granted to Congress the power "to regulate commerce with foreign nations, and among the several states, and with the Indian tribes." In only two articles of commerce has this power been handed back to the states.

The plant shipper is convinced that the solution is to be found in state coöperation-and state action. We realize that as plant shippers we have an obligation which we readily assume. We know that in many states the inspection service is undermanned and not adequately financed. We believe it our obligation to work with you for a correction of this situation. We realize that criticism has been made that nursery inspection amounts to absolutely zero. We have a job to do with you in overcoming that criticism. We know that there are those who believe that the federal government will eventually have to step into this vehicle and take over the driver's seat, an action which both the regulatory officials of the various states and the interstate shippers of plants and plant products believe neither necessary nor desirable. It is the obligation of our two groups to solve these problems now by state cooperation and state action.

SHADE TREE PROCEEDINGS.

Perusal of the 200-page issue of proceedings of the sixteenth National Shade Tree Conference, held at Detroit, Mich., August 27 to 30, reveals it, like its predecessors, as a mine of information for those interested in practices in the preservation of shade trees. For those who may not recall the report of the meeting in this magazine last summer, some of the topics that were the subject of papers and discussions may be mentioned: Standards of tree experts, factors contributing to costs, nature and control of chlorosis, tree wound dressings, city forestry problems, pests of conifers, diseases of oaks and other trees, measuring soil moisture under field conditions and photography for tree men. In addition to these topics, other informative items appear in the report

of the plant clinic, in committee reports and in the discussions.

The text is legibly printed in type about the size of that on this page, and a number of illustrations are helpful.

A number of nurserymen are already members of the organization. Others interested either in membership or copies of the proceedings may write the secretary-treasurer, Dr. L. C. Chadwick, Ohio State University, Columbus, O.

MONROE NURSERY.

Accompanying airplane views of its nursery lands, a short historical sketch of I. E. Ilgenfritz' Sons Co., Monroe, Mich., appeared December 14 in the Detroit Manufacturing and Financial Record. Some of the historical high lights read as follows:

"Nearly 100 years ago, when Michigan was still a wilderness and Monroe was the thriving port of entry at the head of Lake Erie for a large part of the goods and wares that were demanded by the early settlers in southern Michigan, Monroe became the center of the nursery business.

"It was in 1843 that I. E. Ilgenfritz, with a small stock of trees, came to Monroe from Bellefonte, Pa. His trees were planted in what is now the heart of Monroe. After continuing on his own for a little over a year and one-half he purchased a half interest in the nursery of E. H. Reynolds. Mr. Reynolds' interest passed in turn to Jesse Beardsley, who maintained it but for a short time, selling out to Mr. Ilgenfritz. Later the firm was known as Ilgenfritz & Bentley with the admission of R. A. Bentley into the partnership. From 1876 I. E. Ilgenfritz conducted the business as an individual until his sons became members of the firm, which bore the name I. E. Ilgenfritz' Sons Co., 'The Monroe Nursery,' which remains the name by which it is nationally known at the present time.

"As his nursery business prospered Mr. Ilgenfritz gradually acquired title to extensive farming lands, which received a natural appreciation in value as the city of Monroe expanded. As some of these sites were sold, purchases of additional acreage in the outlying sections were made, both to replace the land sold and to further his expansion program. Always, however, it was found necessary to plant additional rented acreage to meet the

demands for nursery stock. Thus, through the years this firm has acquired title to over 900 acres of land, and now occupies in excess of 500 acres of rented land also. With over 1,400 acres in production, this firm markets in the neighborhood of one and one-half million plants each year. The third generation of the Ilgenfritz family is now actively engaged in the direction of the business."

INSURES BOUGAINVILLEA.

According to newspaper report, James A. Hendry, of the Everglades Nursery, Inc., Fort Myers, Fla., has taken out a \$5,000 insurance policy on a white bougainvillea plant, which he believes is the only one of its kind in the United States.

Mr. Hendry said the plant, insured against cold, blight, insects and plant disease, was brought to him by airplane from South America, according to the report, which adds that he has developed more than 300 varieties of bougainvilleas by cross-pollination, but had never been able to produce a pure white flower.

TRADE-MARKS TREES.

For some years Roy F. Wilcox & Co., Montebello, Cal., have been branding the two top-quality lines as Gold Medal and Blue Ribbon trees, but heretofore a paper tag was the only practical branding medium. This tag was often removed, lost or mutilated.

A new method of trade-marking trees and shrubs has been devised by the company. This is a decalcomania transfer with a specially prepared pressure-sensitive adhesive designed for application to rough, porous surfaces such as tree trunks, shrub stems, etc.

This method of trade-marking eliminates any chance of brand removal because the decalcomania can be detached from the tree only by the use of a sharp instrument, which would necessarily leave a telltale mark. The use of the decalcomania has afforded the company an opportunity to take full advantage of the psychological distinction gained by any product carrying a personalized guarantee.

THE Empire Nursery, formerly located on South Highway 99, Ceres, Cal., recently opened at its new location one mile east of Modesto at Waterford road.

TWIN CITIES MEETING.

At the December meeting of the Twin Cities Nurserymen's Association the officers were reëlected, as follows: President, Grant E. Perl; vice-president, H. J. Reid; secretary, Ernest Sheffield.

Prof. W. H. Alderman, University Farm, gave the status of the Ruedlinger memorial fund and sought the opinions of the members regarding it.

Some time was devoted to discussing the code of ethics now in the hands of members. Of several important matters dealt with, one is the replacement of nursery stock. Planting charges, quantity rates and price policies are included in the code, and also a condemnation of free premiums to customers.

ON AIR AT BOSTON.

Cooperating with New England agriculture on the air, some Massachusetts nurservmen will give short talks over stations WBZ and WBZA from 1:30 to 1:45 p. m. during the next six months. The dates of the talks will be given later. The speakers and their subjects are as follows: "Garden Planning in Winter," by Seth L. Kelsey; "Planting for Early Bloom," by Lloyd A. Hathaway; "Flowering Trees for the Small Home," by Winthrop Thurlow; "Trees for Particular Purposes," by Donald Wyman; "Azaleas for New England Gardens," by Harold S. Tiffany, and "Summer Planting," by C. P. Van Tol.

NEW YORK PARK NURSERY.

The New York city park department last month started a nursery on Rikers island, built up through forty years of city dumping and now leveled and cleaned by W. P. A. labor. Six miles of trenches were dug and 13,000 young trees set out by penitentiary inmates. In the spring, a crew of fifty prisoners will water and cultivate the trees.

The nursery will supply 12,000 shade trees annually for replacement in city parks. Replacement of trees has been a problem because of budget limitations, park officials said. To save the expense of buying great numbers of trees from private nurseries, the park department has experimented with small nurseries on park lands, but has not found this entirely satisfactory, because of labor costs and di-

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version of acreage needed for public recreation, according to the New York park authorities.

Three varieties of trees were planted
—Oriental plane, Norway maple and
American elm.

FORMAL DESIGN DOOMED.

Landscape architecture trend in the near future toward designs which allow for production and participation was predicted by Christopher Tunnard, visiting lecturer at Harvard University, in addressing the Connecticut Horticultural Society last month.

The manner in which we as a people have wasted and used up our land resources will require us to think of the productiveness of what is left, he said, and large, formal, purely decorative landscape designs will become a thing of the past.

Declaring that geometric formalism, with many unaccessible areas in design, is also doomed, he illustrated this contention with an air view of Bryant park, in New York city, showing that small parks, in the midst of great congestion, were at least onethird covered with grass upon which it is forbidden to walk. To remove this much of a park from use of the public, he said, is practice fast going into disuse.

Too much attention, he said, has been paid to the axial arrangements of gardens, which merely form "patterns on the ground." The finest type of garden, he contended, is one which takes into account the third dimension and carefully relates the various plantings to each other vertically as well as horizontally.

B. J.

CHARLES FIORE, who was in the hospital last fall, is gradually taking up the reins again at his office, at Prairie View, Ill. He made the trip to Chicago to attend the meeting last month of directors of the Illinois State Nurserymen's Association.

LEAVING for San Diego last month, Cameron Verhalen, 22-year-old son of Ray P. Verhalen, of the Verhalen Nursery Co., Scottsville, Tex., is starting a nine months' course of training with the United States air corps. When he has completed the course, he will receive a commission in that service.



When any new books on fungus diseases is written in the future, I could put in a chapter in that line that would make the entomologists sit up and take notice. Me and Emil discovered a new scale and a bad one too. We named it the "Dismal Wooley Maple Itch." It was really me that named it, but Emil was in on it in a way as I will explain to the members. It was the only time in my life I can remember when having the itch on the maples wasnt nothing to worry about, in fact it saved the day for me and Emil. I will relate the story for the benefit of any of the members which ever finds themselves in the same boat that me and Emil was in

Most of the members can think back not so many years when there was a big scramble to get the orders from the state highway dept and the other state and federal projects which was dished up with the idea in mind to help keep the nurserymen from folding up. But like most projects they didnt turn out at all as advertised. Instead of being such a big boon to the members, it got so nobody could get an order unless he sold the trees at 20% of what any sane nurseryman knew was the right price. But as I have always said, nurserymen are funny. They got their own way to figure things They had the ball right in their hand but they fumbled it. Instead of helping out the members it only made things worse,

That year Emil was looking for a chance to get rid of 400 maples. He couldnt get no trades at the convention or nothin and he figured he was stuck. So when the highway list come in to figure on, Emil made up his mind to do a little fancy figuring. He was sitting in the office in the late winter and he was reading over the specifications, which didnt mean nothing at all to him until he come down to page 18. There it was 400 Maples, for delivery to Casper county on April 1st.

"I'm all through bidding on these lists and getting nothin," Emil says, "this here is one order I aim to get.

Nobody can bid under me on that." He made a big check mark on the paper and went on to reading the other 12 pages of fine print about specifications which was put in mostly just to drive the nurserymen nuts. "Stock must pass rigid inspection for quality and health," Emil read.

"There aint no bugs on the maples, is there?" I says.

"They're as clean as a hounds tooth," Emil says. "Aint no better in the country. Lets go to work and fill out the papers."

"What you going to put em in at, Emil?" I says. "Remember what some of the stuff went for the last time."

"We will go to work and check over the prices in all the wholesale catalogs we got here in the file and see what the boys are asking," Emil says.

Most of the forenoon we spent looking up prices. We found 28 price lists with maples in, and there was 28 different prices in the lists. They run from 1.25 to 5.00 each. "Now the question is," Emil says, "how low will they cut under the printed price."

"Better figure on 50% at least," I says. "You got to take 50% off the lowest price and then knock off

about 4c besides or else you aint even going to get close. 60c ought to get it." I says.

"60c?" Emil says. "John Bushbottom bid 55c last year and he didnt even get the order. John told me at the convention. We will go to work and lay the maples in there to Casper County for 44c, Chas. 44c it is, and I bet we will be the ones to get the order. What do you say, Chas."

"I say you are nuts, Emil. It will cost 50c each to dig the maples and 20c to truck them down to Casper Co. Thats 200 miles if its a foot from Riverbend. What kind of arithmetic are you figuring. According to the way I was brought up, a person cant put out 70c not figuring the cost of the trees and then take in 44c, without hitting a snag some place."

"Anyway the members have been doing it, so I figure it must be in the cards someplace," Emil says. "I got my mind made up, I am going to get that order." So we filled in the papers and made it all out in six copies.

Emil was watching the mail the very next day to see if he got the order. "They dont even open the bids for a week," I says, "and then it takes a couple of weeks for them to think it over. You might as well relax," I says, "for two or three weeks anyway. Maybe by the time the order comes you wont be so hot after it," I says. "44c times 400

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TAXUS AZALEAS RHODODENDRONS

ASK US ABOUT THEM

Wyman's Framingham Nurseries FRAMINGHAM **MASSACHUSETTS** aint going to change anything anyway.

A month later to the day we got the order "subject to inspection of the trees." "If they dont send some gent to inspect which dont know a maple tree from a crow bar there wont be no trouble," Emil says.

The inspection will be made within two weeks the letter said, so Emil was still in an uproar even after the order come in.

On Monday night I was at the regular meeting at the civic club. I no more than got in the door when one of the members braced me about maples. "You remember," he says to me, "the committee that was appointed last fall, Chas., to see about tree planting in the city park and on the park ways all over town? We have decided on maples, Chas., and the members are in favor of buying about 400 trees. Of course, we aim to buy right here in Riverbend. Now I happened to see Jake today and he says the F. and M. Nursery aint got more than a dozen maples left. Jake wants to buy them for us in Iowa and have them shipped in, but I says, no Jake, we will buy them maples from you or from Emil whichever has got the maples in stock. Jake quoted \$5.00 each, but if you can cut under that I will recommend to the committee that we buy from Emil. We aim to close the deal here at the meeting tonight. The town is going to buy half and the civic club is going to pay half. What can you quote on the maples, remember Chas. this is a civic project and we aint got to much money in the treasury.

It took me a minute or two to get my bearings. Here was a order right in my lap and there we was hooked on that highway project for 44c. I had to think fast. All the details of my plan didnt come to me right at the minute, but I had the glimmer of an idea which might save the day. So I says, "John", I says, "we have got the prettiest lot of maples you ever seen in your life and we can supply 400 for the low price of \$4.40 each. Our regular price is \$5.50 but on account of its the civic club I will put them in

When I went home from the civic club that night I had the order in my pocket for the 400 maples, but as the members can well see there was some complications. I had one

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	ork	
	4 lb.	1 lb.
	80.55	1.00
" fraseri, Frazer Fir	.30 1.20	1.00
frazeri. Frazer Fir. frazeri. Frazer Fir. Acer negundo, Box Elder. saccharum, Sugar Maple, northern seed	.25	.70
northern seed	.45	1.65
tametime considerate, Downy	.65	2.35
Shadblow, d.b		
Derry, C.S	.65	2.25
Censerus scandens, American D.,	.75	2.75
Cercis canadensis, American Red- bud Chionanthus virginica, White Fringetree, c.s. Cornus alba sibirica, Coral D., d.b. Cratægus mollis, Downy Haw- thorn, c.s.	.55	
Chionanthus virginica. White	.00	1.85
Fringetree, c.s	.65	2.25
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Cupressus arizonica, Arizona Cypress	.90	3.25
Eucalyptus—varieties on request	.00	3.00
Fraxinus americana, White Ash	.25	.75
" veluting Arizona Ash	.25	.75 3.10
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Hicoria pecan, (Hardy Northern		.40
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Ilex verticiliata, Common Winter- berry, d.b. Juniperus horizontalis, Creeping Juniper, d.b.	.35	1.25
Juniper d h		
Juniper, d.b. Kudzu Vine, Pueraria thunbergiana Larix leptolepis, Japanese Larch	.65	2.25 1.25
Larix leptolepis, Japanese Larch	1.25	4.50
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Magnolia glauca Sweethay ca	1.20	4.25 2.50
suckle, c.s		
nolia	1.00	1.75 3.50
Mahonia aquifolium, Oregon Hol-		
lygrape, c.s	1.10	4.00
C.S	1.25	4.50
Morus alba tat., Russian M., c.s	.45	1.60
Picea engelmanni, Engelmann S " pungens, Colorado Spruce	.75	2.60 2.30
Pinus resinosa, Red Pine " strobus, White Pine Plumbago capensis, blue, per 1000	1.55	5.50
Plumbago capensis, blue, per 1000	.50	1.75
meedm. \$3.30.		
" capensis, white, per 1000		
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avium, Mazzard, c.s cerasifera, Myrobalan P. c.s. incisa, Mame Cherry (Mame-	.35	1.25
cerasifera, Myrobalan P. c.s. incisa, Mame Cherry (Mame-Zakura, c.s. lannesiana, Hitoye C., c.s. mahaleb, Mahaleb Cherry, c.s. pennsylvanica, Pln C., c.s. pumila, c.s.	.50	1.80
" lannesiana, Hitoye C., c.s	.35	1.20 2.50 1.80
" pennsylvanica. Pin C., c.s.	.70	1.80
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" serrulata, oriental C., c.s		
serrulata, Oriental C., c.s. serrulata, sachalinensis, Ezo- Yama Cherry, c.s. subhirtella pendula, Shidare- Higan Weeping Cherry, c.s. tomentosa, Nanking Cherry, c.s. triloba, Flowering Plum, c.s.	.45	1.60
Higan Weeping Cherry, c.s.	.70	2.50
" tomentosa, Nanking Cherry,	.70	2.50
" triloba, Flowering Plum, c.s. " virginiana, Common Choke-	.35	1.20
" virginiana, Common Choke-	.55	1.85
" yedoensis, Yedo Cherry, c.s	.50	1.80
c.s. triloba, Flowering Plum, c.s. virginiana, Common Choke-cherry, c.s. yedocnais, Yedo Cherry, c.s. Rhamus cathartica, Common Buckthorn, d.b.	.35	1.25
	.35	1.25
Doblata passidoscasia Rk Locust	.30	1.00
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Sequola gigantea, Giant Sequola	2.10	7.50
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Sorbus americana, American		
Rosa blanda. Meadow Rose, dried hips Sequola gigantea, Giant Sequola. Shepherdia argentea, Silver Buffalo Berry, d.b. Sorbus americana. American Mountain Ash, d.b. Stewartia pentagyna, Mountain Stewartia, c.s.	.40	1.35
Stewartia pentagyna, Mountain Stewartia, c.s. Tilia americanal, American Linden Tsuga canadensis, Canada Hemlock "caroliniana, Carolina Hem- lock	1.10	4.00
Tauga canadensis Canada Hemlock	.25 1.65	.85
" caroliniana, Carolina Hem-		
Viburnum acerifolium, Mapleleaf	1.65	5.85
Viburnum, d.b.	.35	1.25 1.40
lock Viburnum acerifolium, Mapleleaf Viburnum, d.b. dentatum, Arrowwood, d.b lantana, Wayfaring Tree, d.b.	.50	1.80
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bad obstacle to get around. How can I furnish two orders of 400 maples when we only got 400 altogether. On the way home I thought about all the fine print in these specifications on the highway list, the bond and the guarantee of delivery and all, and especially I thought about the fact the trees must pass inspection.

Next morning before I could get to see Emil, there was a telegram from the highway dept. "Inspector will be at your nursery Wednesday" the telegram read. That was the

next day.

There we was with two orders for the same trees one for 44c and one for \$4.40. I will leave it to the members if it wasnt worth while to try to work out a plan to get out from under the highway order.

When Emil come in I worked up to the civic club order gradual. I hinted we might get a chance to quote on it. "Remember the old proverb, Chas." Emil says, "A bird in the hand. Ill take my chances on a sure thing," he says.

I could see there wasnt no use to depend on Emil to figure any way out of the highway deal even if I told him the whole sitchation. So I worked it out in my own way, and I had to work fast.

Next day, in come the inspector. "Where is the stuff at," he says. Me and Emil got into the Chevvy and drove him out to the back end of the nursery to see the maples. The inspector didnt look like a nurseryman to me. "Have you been at this work long?" I says. "Only a couple of months," he says. "My brother-in-law is a precinct committeeman in Chi. and he got me the job. My regular work is paper hanging but things is slack right now."

"Well, here we are," I says, and we all got out of the car. Anybody could see there was sure something terrible happened to all them fine maples. Emil was more startled than the inspector. Emil blinked and gulped and was to dumbfounded to say a word.

"What's all that messy brown stuff on them trees?" the inspector says. "They dont look good to me. Couldnt ever get by with stuff like that. You gents didnt figure to fool me on that did you?" he says.

Emil was standing there with his mouth open, trying to figure out what in the world was wrong with them maples but he couldn't think of a snappy answer. "Last time I seen these trees," he says, "they was as clean as . . . "

"Its a bad case of the Dismal Wooley Maple itch, inspector," I says, "first time I ever seen it in this nursery. It comes on quick and finishes the trees off in a hurry. I seen just a touch of it here last Saturday and now here it is Wed. and its getting worse all the time. That sure is a tough break for us. We been planning on that order all spring." I says.

Emil started to say something but I shut him up in a hurry. "Do you mean we aint going to get the order?" I says to the inspector. "What do you think?" he says, "I may not be no expert on trees but anybody can see these trees are screwey. Cant give no clean bill on this lot. You will get your certified check and your bond back as soon as I get back to headquarters.

We drove on back to the office. Emil was as glum as a clam. He sure was beaten down. "Chas.," he says, "what in hell come over them maples? That was the most terrible sticky gooey scale I ever seen in my life."

After the inspector left I flashed the order on Emil which I got at the civic club. "Emil," I says, "would you sooner have an order at 44c or 4.40? Furthermore, there aint nothing wrong with them maples which a hours work with the hose and water can't fix up." "Emil," I says, "I done the only thing I could think of. I invented a new tree disease and a new name for it."

"You mean you put that stuff on there yourself, Chas?" Emil says.

"I was almost licked on it at first on account of the sparrows," I says. "They kept picking it off as fast as I could put it on. First I cut up marshmallows in little cubes which I burned over a little in that old lantern to give it a mean color. Then I just stuck the stuff on here and there all over the branches. The sparrows followed me right up. Then I got the idea of dipping the marshmallows in salt peter. That didn't appeal to the birds." "By the way, Emil," I says, "here is the bill for 10 boxes of marshmallows, \$2.20 which I paid out myself in cash at the candy store. "What!" \$2.20 for marshmallows?" Emil yelled. "My gosh Chas., why in the world didnt you get them at the A and P where you could have got them for 60c. \$2.20 for marshmallows! My gosh, Chas., it ain't no wonder we aint making no money in the nursery business with that kind of figgering."

EVERGREEN SELECTION.

[Continued from page 6.]

and provides a thick screen. The fact that lateral branches may extend outward from the climbing stem three or four feet or more gives it a decidedly bushy effect on the building. Where height and mass are desired with limited space available for planting, this variety can be used to good advantage. The pinkish-orange fruits are especially attractive.

The plant formerly listed as Euonymus radicans is now listed as Euonymus fortunei radicans. The true variety is described as having slightly smaller and rounder leaves with less prominent veins than the type. This is the variety that often shows so much variation in leaf form as it is now offered in the trade. A few other varieties of the evergreen wintercreeper are common in the trade. Most prominent are Euonymus fortunei colorata and Euonymus fortunei carrieri. Both of these may become climbing types at times, but I prefer to consider the former more as a creeping, ground cover form and the latter as a small bushy form.

The euonymus are indifferent to

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3 ft. .10 .10 .8

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3 ft. .10 .10 .08
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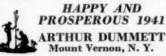
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soil type and will do well in either sun or shade. All varieties and forms are subject to scale. This pest will be discussed more fully in a later article. Propagation is most often by cuttings, although seed propagation is followed.

Hedera helix, the English ivy, is the other outstanding broad-leaved evergreen vine. The species is so common that it hardly needs discussion here. A climbing or creeping plant with dark green, lobed leaves, it has developed many garden forms, some of them not named. This species climbs readily by rootlike holdfasts and is said to be hardy in zone V with some protection.

Hedera helix baltica differs from the type by having smaller leaves and being hardier. It is said to be hardy in zone IV. The veins are often more prominent in this variety than in the type, but not necessarily so. Because of its hardiness it has been considered the best of the varieties. Other smallleaved forms, some of which have been named, may prove to be equally hardy and satisfactory. Hedera helix gracilis, Hahn's self-branching form, and minima have all been reported satisfactory under some conditions, but more particularly as ground covers rather than as vines. Hedera colchica and the varieties of Hedera helix given in the discard list are usually not so satisfactory as the others. A few of them have been used as ground covers or for rockeries with success, and these will be mentioned later. The English ivy and its varieties and forms should be planted in good fibrous, moisture-holdig soil in positions sheltered from the winter sun and wind. Propagation is by cuttings.

Two other plants are given in the secondary list, Akebia quinata and Lonicera japonica halliana. Both of these vines are classed as semievergreen in most of the territory considered in these discussions. Both have previously been discussed in the selected list of the woody deciduous plants.

Akebia trifoliata and Bignonia capreolata and its variety atrosanguinea are among the plants placed in the discard list. Akebia trifoliata is considered to be less satisfactory and not so attractive as Akebia quinata. Bignonia capreolata is native to Virginia and southern Illinois to Florida and Louisiana. It can hardly be considered satisfactory much north of this territory.

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This Business of Ours

Reflections on the Progress and Problems of the Nurseryman - By Ernest Hemming

WHAT CONTROLS THE FRUIT CROP?

This is not written with the idea of giving information, but rather of seeking it and resolves itself into the questions: Why does a tree or shrub bear a good crop of seeds one year and none the next? What are the controlling factors?

The peach orchardist would no doubt assert late frosts in spring when the peach trees were in flower. The apple orchardist would likely offer other obvious reasons, such as bad weather during the flowering period preventing pollination, etc.

This variability of cropping perhaps must be expected, more or less, when plants are being cultivated out of the latitude or altitude to which they are indigenous, but the variability happens with plants that are growing in their native habitat.

The American holly is a good example. Here in Maryland, the woods are full of it. Some years the crop of berries is good; other years, poor. It flowers too late to be affected by frost, as is the peach. Being dioecious, holly has to depend on the bees to bring the pollen. As we have been marking berry-bearing hollies when in flower, they have been under rather close observation. While we admit the bees and insects do a good job in looking after trees that are isolated so as to pollinize them, no leads have been uncovered suggesting what the controlling factors are as regards the holly.

A check to growth will often cause a plant to set flower buds instead of leaf buds. The plantsman takes advantage of this to prune the roots of a wisteria to make it flower. Injury to a vigorous growing young fruit tree will often bring it into bearing before its normal time, probably for the same reason.

Seeking a cause from this angle, it might be that a spell of dry weather at a certain stage of growth may induce the plant to set fruit buds instead of flower buds.

What started this thinking on the subject is the fact that our test row of nineteen Chinese chestnut trees, Castanea mollissima, only bore about

250 pounds of nuts, as against 500 pounds last year. The cause could hardly have been lack of pollination. As the plant is monoecious, producing catskins bearing the pollen in huge quantities, the pistillate flowers could hardly escape being fertilized.

In the case of the filbert or hazelnut, which is also monoecious, the catskins or male flowers are formed the previous autumn, hanging on all winter ready to produce the pollen in early spring. The late Thomas Meehan suggested that, because of the vagaries of the early spring weather in this country, the staminate and pistillate flowers did not develop at the same time, thus making this crop uncertain in this country as compared with England. This could not apply to the Chinese chestnut, as it flowers much later in the spring.

Plants grown under controlled conditions, as in greenhouses, by skilled growers can invariably be made to produce crops. That fact points to

the control of growth as being one of the principal factors, and it does seem as if there was room for research along this line.

E. H.

JUNIPERUS CHINENSIS PFITZERIANA.

The Pfitzer juniper is one of our most common and useful low-spreading junipers. At maturity it forms a dense plant with wide-spreading branches and bluish or grayish-green foliage. Its spread may exceed ten or twelve feet at maturity. When staked and trained upright, it may reach a height of six feet or more. Plants are also often trained into fanshapes, rectangles, globe forms and occasionally espalier forms.

The Pfitzer juniper grows well in a wide variation of soil types and withstands city conditions as well as almost any narrow-leaved evergreen. It prefers sunny exposures, but will stand some shade. It is free from serious insects and diseases except the juniper scale and occasionally red spider. The juniper scale can be controlled with applications of dormant, miscible oil in late spring before the buds open. A nicotine soap spray

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applied when the new brood hatches is also a satisfactory control measure and is less likely to injure the foliage. Red spider can be controlled by sulphur dusts or sprays.

Plants should be trimmed regularly when they are small so that the upper branches will not shade out the lower ones. Heavy snows should be removed to prevent serious splitting of the wide-spreading branches. Propagation is by cuttings or grafting.

The Pfitzer juniper finds its use as a foundation plant, as a specimen, for planting in beds and borders and as a plant for large rock gardens.

Three forms of the Pfitzer juniper have appeared in the trade during the past few years. These are Juniperus chinensis pfitzeriana aurea, a form with yellow young foliage; Juniperus chinensis pfitzeriana compacta, a dwarf, compact form of slow growth, and Juniperus chinensis pfitzeriana plumosa, a relatively rapidgrowing form which fills up much better and sooner than the species. The foliage is of the same color as the species, but somewhat more plumose. From limited observation it would appear to make a salable and desirable plant sooner than the L. C. C.

REDUCE TEXAS RATES.

E. L. Baker, chairman of the transportation committee of the Texas Association of Nurserymen, has furnished the following information on freight rates:

"The railroad commission of Texas ordered into effect December 14, 1940, fourth-class rates on nursery stock, consisting of cuttings, scions or seedlings in barrels or boxes, less carloads, and on trees, shrubs or vines, less carloads, moving between points in Texas via railroads, motor truck lines or rail transport companies." Harvey Mosty, Sec'y.

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The following plant patent was issued December 17, according to Rummler, Rummler & Davis, Chicago patent lawyers:

No. 435. Pear tree. Joseph T. Guraly, Jr., Fairport Harbor, O. A new and distinct variety of pear tree, characterized by the shape of the leaves of its foliage, by the roundness of shape of its fruit and by the generally red coloring of the flesh of the fruit, the yellow and white veins and the early ripening of the fruit.

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Diseases of Trees

Latest Findings on Various Infections of Trade Importance Reported in Recent Research Studies — By Leo R. Tehon

STOP CEDAR-APPLE RUST.

If preliminary tests just reported by Forrest C. Strong and Donald Cation, of Michigan State College, hold good in the larger-scale trials they plan for the coming year, a new and important control, far more simple than any formerly at hand, will have been achieved for the ever-worrisome cedar rust diseases.

Using a chemical known technically as sodium dinitrocresylate, but sold under the trade name Elgetol, these investigators applied a single spray to groups of red cedars, Juniperus virginiana, and dwarf junipers, Juniperus communis, May 8, 1940, and May 16, 1940, when rust galls on these trees and shrubs were showing signs of becoming active. The single spray applications inhibited extension of the orange tentacles and spore masses and prevented germination of the spores contained in them.

A spray containing one per cent of Elgetol regular was most effective, weaker strengths failing to penetrate deeply and allowing some growth of the galls. For positive results an exceptionally thorough application of the spray was necessary.

About two months after the spray was applied, none of the red cedars had shown any foliage injury resulting from its application. However, on some clumps of badly infected dwarf juniper a trace of injury was noticeable.

On the cedars to which Elgetol was applied, four separate kinds of rust infection were present. The cedar-hawthorn rust predominated, but cedar-apple rust, cedar-quince rust and cedar-pear rust were also present. The first two are the rusts commonly seen on hawthorns and apples. It was estimated that on some of the red cedar trees to which spray was applied there were as many as 8,000 to 12,000 rust galls.

In the case of some of the heavily infected red cedars, only the lower half of the tree was sprayed. On the upper, unsprayed parts of these trees the galls developed normally, producing when wet the characteristic masses of jellylike, spore-bearing material. On

the sprayed parts of the trees, however, development of the galls was stopped and the jellylike material was not formed.

Elgetol appears to be the most effective fungicide yet tried for the control of the cedar rusts. By preventing the formation of the jellylike masses of spores on the cedar-borne galls, it forestalls infection of hawthorn, apple and other trees to which the rusts would naturally spread. It thus gives a new method of attack in the control of cedar rusts.

L. R. T.

WOOD ROT OF APPLE TREES.

Generally the short life of apple trees in orchards is attributed to adversities arising from climate and soil. The effects of wood rots or decay, though sometimes observed, have not been given much consideration. To determine their importance, at least in Minnesota orchards, Carl I. Eide and C. M. Christensen, plant pathologists at the Minnesota agricultural experiment station, felled and examined approximately 150 apple trees ranging in age from 10 to 30 years during 1936, 1937 and 1938. In examining each tree, these men attempted to determine the incidence of wood rot, the means of its entrance into trees, its extent in each tree, its correlation with sunscald and similar injuries and its

LINING-OUT STOCK

THILLIAN STORY	
Can be shipped now or later Pe	r 100
Abelia Grandiflora, 2½-in. pots Barberry, Jap red leaf, 2-yr., 9 to 12 ins.	
Beauty Bush, Kolkwitzia, 24-in.	0.40
pots	6.00
Cornus Lutea, yellow branch, 9 to	
Forsythia Fortunel, golden bell, 12	2.50
to 18 ins	2.50
Honeysuckle, Tatarian Pink. 9 to	
12 ins	2.50
Hydrangea P. G., 6 to 12 ins Lilac Marie Legraye, 9 to 12 ins	3.50
Mountain Ash, European, 18 to 24	5.00
ins., nice	3.75
Spiræa Thunbergii, 6 to 9 ins	3.00
Fræbeli, dwarf pink, 6 to 9 ins	
Viburnum Opulus, red berry, 9 to 12 ins.	
Sterile, Am. Snowball, 9 to 12 ins.	
Plicatum, Jap. Snowball, 9 to 12	50
ins	4.25

JUNIPER GRAFTS

HARMON NURSERY Prospect, O.

From 2%-in. pots
Ready for shipment about April 1, 1941.
Made Right, Packed Right, Priced Right.
Discount for early orders.
Send for list of varieties.

FIKE NURSERIES
Hopkinsville, Ky.

apparent effect on the health and life of the trees.

Among fifty 15-year-old trees, these men report, forty-eight were infected with rot to a limited extent. Among sixty-eight trees 22 years old, all in one orchard, twelve were badly decayed and had rot extending throughout most of the trunk and out into some of the branches, twenty-two were moderately decayed and twentytwo slightly decayed; only twelve in the group were not obviously rotted. Among trees 20 to 30 years old cut at various places in Minnesota, most were fairly extensively decayed, the older trees having in general a greater volume of rotted wood.

The limited data presented on varietal susceptibility by the trees examined indicated that the incidence of rot among trees and its extent in individual trees at a given age were greater in Wealthy than in Oldenburg, Hibernal or Patten Greening. This fact possibly provides explanation for an observation made in 1921 by W. G. Brierley that in Minnesota the average life of Wealthy trees is about 26 years, while others live 34 to 37 years.

In by far the greater number of cases rot had entered the trees through branch stubs. Stubs no more than onequarter inch in diameter permitted the entrance of decay, although if

WHILE YOU ARE THINKING ABOUT

mailing a circular or special list to move surplus stock in time, an advertisement in the

AMERICAN NURSERYMAN

would carry your offer to trade buyers quickly and at less cost and you may be sure it will be seen and read.

One-cent postage would cost \$45 to reach our 4,500 readers.

But a full-page ad costs but \$60; one-half page, \$30; other spaces in proportion.

Note how others use this means to turn their stock into cash.

Now is the time for action!

Forms for January 15 issue will close January 10.

15,000

specimen Pin OAKS, 3 to 4½-in.; stemmed, 6 to 7 ft.; spaced 8x8 ft. Transplanted 1938.

25,000 PERFECT SPEC. HEMLOCK, 6 to 15 ft.

SEVERAL THOUSAND

JAPANESE BEETLE TREATED HEMLOCK, 6 to 10 ft. TAXUS CAPITATA, 4 to 10 ft. All reasonably priced

Outpost Nurseries, Inc. Ridgefield, Conn.

Carload prices on

BARBERRY and CALIFORNIA PRIVET

will amaze you. Write.

75 acres. Choice young evergreens, B & B. Quantity production, 300 acres.

GARDNER'S NURSERIES

ROCKY HILL, CONN.

SHADE TREES

One to three inches

Rirch

Maples Oaks

Elms Lindens Poplars

Spaced and well grown

Write Us

JACKSON & PERKINS COMPANY

Newark, New York

PRINCETON NURSERIES

of PRINCETON, N. J. SUPERIOR Hardy Ornamentals

PRIVET and BERBERIS

Splendid Stock Write for Special Quotation

LESTER C. LOVETT DELAWARE MILFORD

Old English BOXWOOD

Wholesale 10 ins. and up - Any quantity

BOXWOOD GARDENS Mrs. R. P. Royer, High Point, High Point, N. C.

NORTHERN COLLECTED EVERGREENS

Hardy, well rooted. Ables balsames, Thuja occidentalis, Tsuga canadensis. Priced per 1000. Cash. 3 to 6 ina...\$5.00 \$ to 12 ins...\$12.00 \$ to 9 ins...\$00 12 to 18 ins...\$2.00 Ferns, plants and native orchids. WILLIAM CROSBY HORSFORD, Charlette, Vt.

healing over took place quickly, decay then progressed slowly. When rot entered through stubs an inch or more in diameter, it usually advanced rapidly; this was especially likely to be true if the stub became thoroughly decayed before being closed over by the healing callus. Invariably, stubs two inches in diameter or more were rotted.

In several cases the entrance of rots could be traced to split crotches, to frost-cracks and to sunscald injury. In the case of only three among fifty trees 22 years old was there evidence that rot had entered through the roots. Spread of rot through the tree was, also, considerably facilitated by sunscald, cold injury (blackheart), frostcracks and other wounds.

In laboratory tests about twenty species of fungi were found associated with various rots. Ten of these were identifiable and included several of the common bracket-type fungi long known to be associated actively or passively with wood rots of various hardwood trees.

The opinion Eide and Christensen express, as a result of their investigation, is that wood rot and decay not only accompany the early decline of apple trees, but may indeed be one of the causes of that decline. They believe that rots enter apple trees at a fairly early period in the life of the trees and become increasingly prevalent and involve larger volumes of wood as the trees grow older. Consequently, by the time the trees reach their maximum bearing age most of them are infected, and in many, even though they are not more than 20 to 25 years old, so great a portion is rotted that, if the rot had no more effect than to weaken the tree mechanically. there would be little chance of the tree's surviving many years.

In suggesting a means of avoiding destruction of trees by rots, emphasis is laid on that fact that most rots enter through wounds. If it were practical to prevent or reduce the numbers of wounds, it is probable that decay might at least be delayed and the productive life of the trees be increased considerably. Pruning branches when small, covering all pruning and other wounds, no matter how small, with a fungicidal dressing, bracing the larger branches to prevent splitting at the crotches and painting or wrapping trunks to prevent sunscald are the principal measures advocated.

NORWAY MAPLE WHIPS 5 to 6 ft. and 6 to 7 ft.

HYDRANGEA P. G. 1-yr. layers \$4.00 per 100, \$32.50 per 1000.

A Complete Line of ORNAMENTAL TREES & SHRUBS

NORWAY MAPLES

specimen trees 1¼ to 4-in. cal.

THOMAS B. MEEHAN CO: DRESHER, PA.

LINING-OUT STOCK

Tsuga canadensis, Abies balsamea, Picea rubra, Pinus Strobus, Acer rubrum and saccharum; Betula lenta, lutea, papyrifera and populifolia; Fagus americana, Fraxinus americana, Prunus pennsylvanica and serotina and many other trees and shrubs.

L. E. Williams Nursery Co.

P. O. Box 147, Exeter, N. H.

JUNIPERS

Grafted on Juniperus virginiana understocks, available for spring delivery.

These plants are grown in pots 2½x2%.

	100	1000
virginiana glauca	\$20.00	\$180,00
Canærtii	20.00	180.00
Burkii	. 20.00	180.00
Keteleeri	20.00	180.00
Kosteri		180.00
Schottii	20.00	180.00
pyramidiformis	20.00	180.00
elegantissima	20.00	180.00
Meyeri	20.00	180.00
Smithii	20.00	180.00
Babina	29.00	180.00
Von Ehron	20.00	180.00
Phtzeriana	20.00	180.00
These prices are F.O.B. Louisvill	le, Ky.	Boxing
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LOUISVILLE NURSERIES R 6, Louisville, Ky.

HOOD NURSERIES

Special Low Prices Apples – Pink Dogwood Magnolias – Shade Trees Evergreens – Shrubbery Send us your list for quotations.

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Write for our complete catalog T. G. OWEN & SON, INC. outh's Largest Florists and Nurseryme Columbus, Miss.

BURR -

Leading Wholesale Source For Shrubs Roses Trees Daphne Hedge Plants Perennials Vines Evergreens Fruit Trees Liners C. R. BURR & CO., INC., Manchester, Conn.

EMPIRE NURSERY & ORCHARD Baileyten, Alabama.

We still have a small surplus in Apple Sciens, \$2.50 per 1000 sticks, and Pear Sciens, \$2.75 per 1000 sticks. All No. 1, averaging 3 grafts and up per stick.
Also. 1,500 Gardenia Reses, own roots, No. 2, 3e each. Fine plants for lining-out or for mail orders.

Coming Events

CONVENTION CALENDAR.

January 2 and 3, Iowa Nurserymen's Association, Des Moines.

January 7 to 9, Western Association of Nurserymen, Muehlebach hotel, Kansas

City, Mo.

January 8, Missouri Nurserymen's Association, Hotel Muehlebach, Kansas City. January 9 and 10, Indiana Association Nurserymen, Antlers hotel, Indianapolis.

January 9 and 10, North Carolina Association of Nurserymen, annual meeting and short course, at North Carolina State College, Raleigh.

January 9 and 10, Ohio Nurserymen's Association, Deshler-Wallick hotel, Colum-

January 10, Maryland Nurserymen's Association, College Park.

January 13. Georgia State Nurserymen's Association, Athens.

January 13, Long Island Nurserymen's Association, Hotel Huntington, Hunting

January 14, Massachusetts Nurserymen's Association, Hotel Kenmore, Bos-

January 14 to 16, Illinois State Nurserymen's Association, Hotel La Salle, Chicago. January 17, New York State Nurserymen's Association, Powers hotel, Roches-

January 20 to 22, annual short course for nurserymen, Ohio State University,

Columbus

January 21 to 23, Michigan Association of Nurserymen and A. A. N. central regional meeting, Hotel Hayes, Jackson. January 22, Connecticut Nurserymen's Association, Waverly Inn, Cheshire.

January 22 and 23, Oklahoma State Nurserymen's Association, Hotel Huckins,

Oklahoma City.

January 27, Kentucky State Nurserymen's Association, Kentucky hotel, Louis-

January 28 to 29, New Jersey Associa-tion of Nurserymen and A. A. N. eastern regional meeting, Hotel Hildebrecht, Trenton.

February 4 to 6, New England Nurserymen's Association, Hotel Kenmore, Boston.

February 5 and 6, Pennsylvania Nurs-Association, Roosevelt hotel, ervmen's Pittsburgh.

February 6 and 7, Wisconsin Nursery-men's Association, Hotel Schroeder, Milwankee.

February 10 to 14, short course in nursery management, Rutgers University, New Brunswick, N. J.

February 19 and 20, annual short course, University of Maryland, College Park, Md.

February 19 and 20, Tennessee State Nurserymen's Association, Hotel Andrew Jackson, Nashville.

February 24 and 25, Northern Retail Nurserymen's Association, place to be announced.

OHIO PROGRAM.

The program of the thirty-fourth annual meeting of the Ohio Nurserymen's Association, to be held at the Deshler-Wallick hotel, Columbus, January 9 and 10, is as follows:

JANUARY 9, 10 A. M. Call to order, by R. P. Cook, president. Roll call.

Introduction of new members.

Reading of minutes.

Report of acting se Clarence O. Siebenthaler. acting secretary-treasurer, Reading of communications.

Reports of committees: Executive committee, on dues; fair exhibit, by B. H. Roger Kleinmeyer; membership, by Roger Champion; legislative, by C. O. Sieben-

Report on state insect and plant disease control work, by John W. Baringer, specialist in charge, division of plant industry.

JANUARY 9, 2 P. M.

"The Present Status of Studies in Photosynthesis," by Dr. O. L. Inman, director, C. F. Kettering Foundation for the Study of Chlorophyll and Photosynthesis, Antioch College, Yellow Springs, O.

"Present Status of Phloem Necrosis of Elm Investigations in the Middle Western States," by Dr. Roger U. Swingle, United States Department of Agriculture.

"Coöperation of the Department of Agriculture with Ohio Nurserymen," by John T. Brown, director of Ohio department of agriculture.

JANUARY 9, 7 P. M.

Ninth annual "Ye Olde Time Dinner and Dance." Dr. J. H. Gourley, toastmaster. Speakers: John W. Bricker, governor of Ohio; and Charles Milton Newscomb, on "What Are You Afraid Of?" Floor show and dance.

IANUARY 10, 10 A. M. "What's New?" by Dr. L. C. Chadwick,

Ohio State University.

"Labor Laws, Federal and State, as They Apply to Nurserymen," Ward, director of indu Apply to Nurserymen," by Ralph P. Ward, director of industrial relations, Ohio Chamber of Commerce, Columbus.
"The Nature of Sales Appeal," by Dr. Felix E. Held, department of commerce, Ohio State University.

JANUARY 10, 12:15 P. M.

Luncheon meeting of Ohio chapter, No. 1, American Association of Nurserymen. President, Raymond P. Cook; secretary, Thomas B. Medlyn.

Report of delegates to New York city

convention.

1941 A. A. N. convention. Election of officers. Election of delegates.

JANUARY 10, 2 P. M.

Increasing Nursery and Landscape

"New Market for Surplus Evergreens," by Walter Burwell.
"Summer Sales, Some Are Not," by

George Kern. "How to Sell the Same Customer Year after Year," by Parker Leonard.

"Reselling a Lost Order," by Herman

"Good and Bad Features of Roadside Improvement Contracts," by Howard Bur-

Unfinished business. Appointment of committees.

New business. Election of officers.

Selection of meeting places, summer, 1941, and winter, 1942.

ILLINOIS PROGRAM.

To the important speakers on the program of the Illinois State Nurserymen's Association convention, at Chicago, January 14 to 16, as they were announced in the December 15 issue, has been added A. M. Augustine, Normal, Ill., first secretary and third president of the state association, who will recall the pioneer days of the organization in an address at the first session.

The meeting will consist of three sessions on successive afternoons, at the Hotel La Salle. The same quarters on the mezzanine floor will be occupied as hitherto, though the room names have been changed. The Illinois room, formerly the east exhibit hall, will be divided into virtually two separate rooms, one a meeting room and the other equipped as a special lobby and lounge room for nurserymen, since there will be no exhibit space this year. The luncheon on Thursday will be held in the American room, formerly the west exhibit hall.

One morning meeting will be held, the annual session of the Illinois chapter of the American Association of Nurserymen, to be held at 10 a. m., January 16, in parlor A, on the mezzanine floor.

The schedule of the state association sessions is as follows:

JANUARY 14, 2 P. M.

President's address, by Ernest Kruse. Treasurer's report, by Arthur L. Palm-

"The Organization and Early Days of the Illinois State Nurserymen's Associaby A. M. Augustine, Normal, Ill. The Nurserymen's National Interests, by Avery H. Steinmetz, president, Amer-

ican Association of Nurserymen.
"The Rules and Regulations of the Federal Social Security and Wage-hour Laws as They Affect Nurserymen," by Richard P. White, secretary, American

"Trade Barriers as They Affect the Interstate Shipment of Nursery Stock," by Lee McClain, chairman, A. A. N. trade barriers committee.

JANUARY 15, 2 P. M.

"The Rules and Regulations of the Interstate Commerce Commission and the Illinois State Truck Act as They Affect Private Carriers," by F. E. Ertsman, sec-retary, Motor Truck Owners' Associaretary, tion of Illinois, Chicago.
"Diseases of Shade Trees," by Dr. L.

R. Tehon, botanist, Illinois State Natural History Survey, Urbana.

Reports of committees: Legislative, by H. Hill, chairman; nominating, by Jacob Simonsen, chairman.

Round-table discussions. Short talks and general discussions on a number of items of interest, including the Illinois personal property tax and the present situation in regard to growing nursery

LINING-OUT EVERGREENS

Growers of a Complete Line of Nursery Stock.

Write for bulletin

Sherman Nursery Co. Charles City, Iowa

WINTER

is here . . and a good time to get your Lining-out Stock ordered. Plant up those open blocks in your field and be ready with salable stock to cash in on the prosperity to follow the spending of Billions on National Defense. Order today.

NAPERVILLE NURSERIES NAPERVILLE



Northern-Grown **Nursery Stock**

Evergreen Liners Specimen Evergreens, B&B Hardy Fruit Trees Hardy Apple Seedlings **Ornamental Shrubs** Lining-out Shrubs, Trees and Vines Write for price list.

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EVERGREENS

Fine assortment of the best types of B&B Evergreens.

HOLTON & HUNKEL CO.

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Wholesale growers of the best Ornamental Evergreens, Deciduous Trees, Shrubs and Roses. Write for our current trade list.

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WHOLESALE GROWERS

W HOLDSTRAM
Specializing in
EVERGREEN SEEDLINGS
TRANSPLANTS AND APPLE TREES
Write for price list.
Send us your trade list. MATHEWS EGGERT NURSERY North Muskegon, Mich.

stock, the Japanese beetle situation in the central west, legislative prospects for 1941, etc.

JANUARY 16, 12:15 P. M. Luncheon. Address, "Creative Sell-ing," by Dave Colcord, editor, Yourself Magazine, Marengo, Ill.

Business Session. Committee reports: Auditing, by Roger Leesley, chairman; resolutions, Gerald Nelson, chairman.

Unfinished business. New business.

Report of nominating committee, by Jacob Simonsen, chairman. Election of officers.

INDIANA PROGRAM.

The program of the seventh annual meeting of the Indiana State Nurserymen's Association, to be held at the Hotel Antlers, Indianapolis, January 9 and 10, is as follows:

JANUARY 9, 10 A. M. Call to order, by President Homer L. Wiegand.

Invocation, by Rev. C. R. Lizenby, St. Paul Methodist church, Indianapolis. Opening address, by President Homer

L. Wiegand. Educational film on fertilization, shown by T. H. Jeffery, American Agricultural Chemical Co.

"Salesmanship," by F comb & Hoke Mfg. Co. " by Frank Hoke, Hol-

Luncheon. Panel discussion, by Professors Greene, McClintock and Gregory, Purdue Univer-

sity.
"Lawn Building, Maintenance and Weed
Control," by Carl A. Bretzlaff, Meridian
Hills Country Club, Indianapolis.

"Insurance Problems of Nurserymen," by Alvin T. Coate and Mary Coate Mc-Neely, Insurance Audit & Inspection Co., Indianapolis.

Banquet at 7 p. m. Toastmaster, Phil Lutz. Speaker, "Dusty" Miller, Wilming-ton, O. Entertainment.

JANUARY 10, 9:30 A. M. Report of nominating committee.

Election of officers. 'Roadside Marketing of Nursery Stock" by A. S. Buskirk, Buskirk Aquarium, Independence, O.
"Handling Personnel," by Roland Allen.

Luncheon.

Business meeting: Reading of minutes, treasurer's report and reports of auditing, executive, membership and legislative com-

Meeting of chapter XI of American Association of Nurserymen. General discussion by nurserymen, Alex

Tuschinsky, chairman.

NEW ENGLAND PROGRAM.

Between the first and third days of the annual meeting of the New England Nurserymen's Association, to be held February 4 to 6, at the Hotel Kenmore, Boston, will be sandwiched in a day containing an educational program. This will be extremely informative and designed to appeal particularly to nursery superintendents, foremen, propagators, etc., as well as nursery owners or managers. It will

LINING-OUT STOCK

AZALEA CALENDULACEA, Flame Azalea.

AZALEA, Mixed Colors.

18 to 24 inches, per 1000, \$18.00.
The Azaleas are well branched and have plenty of bloom buds.

TSUGA CANADENSIS, Hemlock.

2 to 4 inches, S., per 1000, \$3.00. 4 to 6 inches, S., per 1000, \$6.00.

ILEX OPACA, American Holly. 2 to 4 inches, S., per 1000, \$4.00. 4 to 6 inches, S., per 1000, \$6.00.

KALMIA LATIFOLIA, Mountain Laurel. 2 to 4 inches, S., per 1000, \$5.00. 4 to 6 inches, S., per 1000, \$7.00.

JUNIPERUS VIRGINIANA, Red Cedar.

VINCA MINOR, Myrtle Vine.

HALL'S HONEYSUCKLE.

EVERGREEN GARDEN NURSERY

McMinnville, Tenn.

Lining-out Stock

At special cash prices. Per 1000
Althea Rosea, sdigs., 6 to 12 ins., \$5.00
Althea Rosea, sdigs., 12 to 18 ins., 8.00
Athea Rosea, sdigs., 12 to 18 ins., 8.00
Aralea Calendulaces, 12 to 18 ins., 40.00
Aronia Arbutifolia, 18 to 24 ins., 8.00
Corylus Americana, 12 to 18 ins., 10.00
Corylus Americana, 12 to 18 ins., 15.00
Evonymus Americana, 18 to 24 ins., 15.00
Hamamelis Virginiana, 4 to 6 ins. 25.00
Hamamelis Virginiana, 6 to 12 ins., 35.00
Rhus Copallina, 12 to 18 ins., 8.00
Rhus Copallina, 12 to 18 ins., 8.00
Rhus Copallina, 12 to 18 ins., 8.00
Rhus Copallina, 2 to 3 ft., 15.00
Roblina Hispida, 12 to 24 ins., 12.06
Symphoricarpos Vulgaris,
12 to 18 ins., 8.00
Roblina Hispida, 18 to 24 ins., 12.06
Symphoricarpos Vulgaris,
18 to 24 ins., 10.00
Fraxinus Lanceolata, 12 to 18 ins., 5.00
Fraxinus Canceolata, 12 At special cash prices.

NOLERIDGE NURSERIES

McMinnville, Tenn.

Who offers the nursery trade of this country the greatest line of rare trees and shrubs?

Write for list 4041 and find out! But use your business stationery, as post cards will be ignored.

W. B. CLARKE & CO. San Jose, Calif.

LOWERING CRABS

and Japanese Flowering Cherries Finest varieties for lining out and finished stock.

THE COTTAGE GARDENS
N. I. W. Kriek
Lansing, Mich.



EVERGREENS

For Seventy-seven Years Growers of Quality Evergreens Lining-out Stock a Specialty Write for Trade List

EVERGREEN NURSERY CO.

be under the supervision of Donald Wyman, chairman of the educational committee.

The first and third days will be devoted to association business. Talks will be given by several outstanding persons on timely subjects, while discussion will be held on various trade problems. It is hoped that Governor Leverett Saltonstall will be the guest of honor at the annual dinner, February 5.

OKLAHOMA PROGRAM.

The program announced by Secretary J. J. Maddox for the annual meeting of the Oklahoma State Nurserymen's Association, to be held at the Huckins hotel, Oklahoma City, January 22 and 23, is as follows:

JANUARY 22, MORNING SESSION. Invocation, by W. E. Rey, Oklahoma City.

Welcome address, by D. W. Hogan, of the chamber of commerce. Response, by Paul V. Baker, Enid.

Response, by Paul V. Baker, Enid. President's address, by C. E. Stephens, Tulsa.

Appointment of special committees. Luncheon. Address by L. C. Mersfelder, general agent, Kansas City Life Insurance Co.

JANUARY 22, AFTERNOON SESSION.

Report on American Association of Nurserymen, by J. Frank Sneed, executive committee member. "Landscape Designs for Small Prop-

"Landscape Designs for Small Properties and Their Presentation," by Prof. L. R. Quinlan, department of horticulture, Kansas A. and M. College.
"Chemical Elements Necessary for

"Chemical Elements Necessary for Soils," by Dr. Orville Schultz, department of botany, Oklahoma A. and M. College.

Nurserymen's forum and introduction of visitors and out-of-state nurserymen.

JANUARY 22, 7 P. M.
Banquet. Speakers: Elmer T. Peterson, formerly editor of Better Homes and Gardens, now associate editor of the Daily Oklahoman. Mrs. Henry B. Triggs, Fort Worth, central regional vice-president of the National Council of State Garden Clubs. Followed by music, dancing and floor show.

JANUARY 23, MORNING SESSION. Unfinished business.

"The Soils and Fertilizers Best for Nursery Uses," by Dr. H. F. Murphy, Oklahoma A, and M. College.

Summer short course report, by Dr. Frank B. Cross.

Nursery problems.

JANUARY 23, AFTERNOON SESSION.

Unfinished business.
New business.
Election of officers.
Adjournment for field demonstration of nursery tools.

MASSACHUSETTS PROGRAM.

At the annual meeting of the Massachusetts Nurserymen's Association to be held January 14 at the Hotel

Kenmore, Boston, two speakers are scheduled, A. B. Loring, of the Springfield Bank for Coöperatives, and Henry F. Long, commissioner of corporations and taxation. Legislative and other problems will be discussed, according to L. A. Hathaway, secretary.

NEW YORK PROGRAM.

The tentative program of the annual meeting of the New York State Nurserymen's Association, to be held at the Powers hotel, Rochester, January 17, includes the following features:

Address by the president, Henry Maxwell, Geneva.

"The Japanese Beetle, X-Disease of Peaches, the Dutch Elm Disease and the State Inspection Service," by Dr. A. B. Buchholz, Albany.

"How Cornell Can Best Serve the Nurserymen," by Dr. L. H. MacDaniels, Ithaca.

"Soil Improvement for Roses," by Dr. R. C. Allen, Cornell University.

Luncheon. Toastmaster, Art Christy, Newark, N. Y. Speaker yet to be announced, followed by question box period.

"Regulation, Trade Barriers and Wagehour Law," by Dr. Richard P. White, A. A. N. secretary.

Election of officers.

Group meetings: Landscape and sales gardens, led by William Pitkin, Jr., Rochester; catalogue problems, by Howard Maloney, Dansville; agency problems, by Kenneth Cadde; production problems, by R. L. Holmes, Newark.

NORTHERN RETAIL MEET.

The Northern Retail Nurserymen's Association, which ordinarily meets at the time of the convention of the Minnesota State Nurserymen's Association, in December, deferred its gathering until a later date, February 24 and 25.

CENTRAL REGION MEETING.

Supplementing the announcement of the convention program of the Michigan Association of Nurserymen in the December 15 issue, Benjamin J. Greening reports the completion of the program for the third annual conference of members in region 3 of the American Association of Nurserymen, which will be held between the two days of the Michigan state meeting, at the Hotel Hayes, Jackson.

The A. A. N. regional meeting, January 22, will be called to order at 10 a. m. by Elden H. Burgess, president of the Michigan association. After the address of welcome by Mr. Greening, as chairman of region 3 and member of the A. A. N. executive committee, the program carries the notation: "Reading of correspondence (Riverbend, Ill.)"

Presidents of the state A. A. N. chapters will report: Ohio, R. P. Cook; Michigan, Elden H. Burgess; Illinois, Ernest Kruse; Indiana, W. E. Cunningham, and Wisconsin, Oscar Hoefer.

Upon the introduction of A. A. N. officers and executive committee members present, the president of the association, Avery H. Steinmetz, will speak on "A United Industry." His talk will be a statement of relationships and obligations of the A. A. N. to its chapters and state associations. It will include an outline of the basic problems of the industry and how they are being attacked through the leadership of the A. A. N. and coöperating units of the trade.

"The Recent Evolution of the A. A. N.," an address by Richard

FRUIT TREES

Fruit Tree Seedlings Shade and Ornamental Trees

Complete line Fruit Trees, Fruit Tree Seedlings, Shade and Ornamentals. Well grown stock with plenty of good roots, carefully graded and properly packed.

We have rich, new, volcanic ash soil, a long and favorable growing season. Stock is thoroughly matured before digging. All stock dug with our caterpillar digger which gets the roots.

Write us regarding your fruit tree and other requirements for immediate or for spring shipment.



300 Acres - 35th Year



McMINNVILLE, TENN.

Our Offer of Transplanted Nursery-Grown Ornamental Shrubs

	er 100
Benzoin, Spicebush, 2 to 3 ft	\$12.00
Japanese Barberry, 2 to 3 ft	15.00
Red Leaf Barberry, 2 to 3 ft	35,00
Calycanthus, Sweet Shrub, 2 to 3 ft.	12.00
Cephalanthus, Buttonbush, 2 to 3	
ft	12.00
Cornus stolonifera, 2 to 3 ft	4.50
Deutzia P. of R., 2 to 3 ft	7.00
Evonymus americanus, 2 to 3 ft	10.00
Forsythia Fortunel, 2 to 3 ft	7.00
Witch Hazel, 2 to 3 ft	15.00
Oakleaf Hydrangea, 2 to 3 ft	25.00
Hex verticillata, 2 to 3 ft	25.00
Purple Fringe, 2 to 3 ft	12.50
Spiraea V. H., 2 to 3 ft	7.50
Symphoricarpos vulgaris, 2 to 3 ft.	6.00
Viburnum dentatum, 2 to 3 ft	25.00
Weigela rosea, 2 to 3 ft	10.00
Write for Our Wholesale Trade Lie	
"	

PEAR TREES

One-year Trees. Almost all are whips. Two-year Trees. Fairly well branched.

Baldwin-New Blight-proof (3c higher each grade)
clapp Favorite
Duchesse
Flemish Beauty
Garber Howell Pattens Kieffer Pineapple Le Conte Seckel Lincoln Sugar

All trees are nice. Good heavy caliper each grade.

Per 10 Per 100 Per 1000 Territo Ferrito Ferrit

In 6 to 7-foot trees we have: Baldwin, Bartlett, Flemish Beauty, Garber, Lin-coln, Pineapple.

Packed in bales at cost. I sell ONLY GOOD STOCK with Best Service Possible.

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2-Year California Privet, Cornus Sibirica and Crape Myrtle

at the right price. A few Pears in Surplus. May we quote you prices?

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QUALITY PERENNIAL PLANTS

Specialties
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Let us quote on your perennial needs.

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Pot-grown plants; ever a hundred varieties, Dried Herbs for Flavoring and Fragrance. Other plants of unusual character and with the charm of old-time gardens. New Catalogue sent on receipt of 10 cents

WEATHERED OAK HERB FARM, INC.

AT THEIR BEST. Ask for List

The Cottage Gardens N. I. W. Krick Lansing, Mich. P. White, executive secretary, will be a brief statement of the recent growth of the A. A. N. and the underlying reasons therefor.

"The 1941 Convention Cruise" will be announced in detail by Ben-

jamin I. Greening.

After a buffet luncheon as guests of the Michigan Association of Nurserymen, the members will view motion pictures of the New York convention last July taken by Peter Cascio, West Hartford, Conn.

Much of the afternoon session will be taken up with a talk on "The 1941 Legislative Outlook, State and National," by Richard P. White. This will be a preview of what can be expected in legislative and administrative matters during 1941 and anexplanation of how the A. A. N., its affiliated chapters and state associations can most effectively meet anticipated problems. Such subjects as wage-hour law amendments, social security law changes, motor vehicle act regulations, coöperation with plant boards on elimination of trade barriers, our place in national defense, etc., will be discussed.

At its conclusion ample time will be allowed for discussion and ques-

In the evening, at 7 p. m., will be held the annual old-time banquet of the Michigan association.

OHIO SHORT COURSE.

The annual short course for nurserymen, landscape gardeners and arborists is to be held January 20 to 22, in Campbell hall, at Ohio State University, Columbus. The program, which will be presented by members of the department of horticulture except where noted, is as follows:

JANUARY 20, 9 A. M. Registration.

Inspection of greenhouse work. JANUARY 20, 1 P. M.

Nursery Practices.

Discussion leader, Alex Laurie.

"Experiments with Outdoor Roses at Ohio State University During 1940: Soil Mixtures, Fertilizer Tests and Black Spot Control," by L. C. Chadwick.

"New Developments in the Use of Synthetic Growth Substances," by John

C. Swartley.
"Suggested Grasses and Legumes for Cover Crops in Nurseries," by R. E. Culbertson, associate agrostologist, soil conservation service, U. S. D. A., Upper Darby, Pa.

"Methods of Propagating New Plants," by Henry J. Hohman, Kingsville Nurs-eries, Inc., Kingsville, Md. "Some Strangers in Our Gardens," by

J. H. Gourley. [Continued on next page.]

SIBERIAN FLOWERING CRAB

One of the prettiest flowering crabs. Hardiest of them all. Very fragrant, large, early spring blossoms. Red buds, flowers pink and white. Plant extensively as specimen lawn trees, or along drives and walks, on home lawns and public grounds.

Size Per 10 Per 25 Per 100
3 to 4 ft., br. \$2.00 \$3.50 \$12.50
2 to 3 ft., br. 1.50 2.50 7.50
18 to 24 in., br. 1.00 1.75 5.00
Send for list of Newest Plant Introductions of Prof. N. E. Hansen and Carl A. Hansen.

MALUS BACCATA

Hardiest Apple Root Stock	Known
Sizes and Grades %-in. and up, br., heavy	
¼-in. and up, straight, heavy No. 1, 3/16 to ¼-in., strong No. 2, 2/16 to 3/16-in., strong. No. 3, about 2/16-in	15.00
5% discount and free packing with order.	for cash

CARL A. HANSEN NURSERY BROOKINGS, S. DAK.

BARGAINS **Business Changing Hands**

The O. H. Perry Nursery Co. is going under different management after January 15, 1941. After that time we shall not offer any more collected stock. We shall only offer first-class nursery-grown plants. If you are interested in any of the native collected stock offered here, you can place your order now and we will ship any time you are ready for it.

AZALEA. Flame Azalea.
12 to 18 ins., liners, 100, \$2.50; 1000, \$20.00.

to 24 ins., medium clumps, 100, \$5.00; 000, \$40.00.

AZALEA VISCOSA. 18 to 24 ins., liners, 100, \$2.00; 1000. \$15.00, ins., medium clumps, 100, \$4.00; 1000, \$35.00.

ILEX OPACA. American Holly. to 6 ins., S., 1000, \$5.00. to 12 ins., S., 1000, \$8.00.

HEMLOCK. 2 to 4 ins., S., 1000, \$3.50. 4 to 6 ins., S., 1000, \$4.50.

O. H. Perry Nursery Co. McMinnville, Tenn.

RED-FLOWERING DOGWOOD

Cornus florida rubra

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2	to	18	ins	20.00
8	to	24	ins	27.50

Cash. No packing charges

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Pfitzer Junipers, 3½ to 4 ft. spread Spiny Greek Junipers, 3 to 4 ft.

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R. H. Mohlenhoff, Prop. CLEVELAND, MISS.

KERRIA JAPONICA

Double Flowering

Largest Stock in America.

The Willis Nursery Company Ottawa, Kans. Progressive Nurserymen

IANUARY 21, 9 A. M. Landscape-arboricultural Practices.

Landscape-arboricultural Practices.

Discussion leader, L. C. Chadwick.

"Gadgets and Small Tools for Landscape Gardeners and Arborists." by Harvey Bicknell, Bicknell Horticultural Service, Shaker Heights, O., for the landscape gardeners, and Leslie Petrie, Charles F. Irish Co., Cleveland, O., for the arborists.

"Control of Lawn Weeds," by C. R. Runyan, superintendent, Cemetery of Spring Grove, Cincinnati, O.

IANIJARY 21, 1, P. M.

JANUARY 21, 1 P. M. Garden Flowers and Pests.

Discussion leader, Victor H. Ries. "Garden Flowers," by Victor H. Ries "Garden Flowers, by Victor and on bulbs, G. H. Poesch on hardy chrys-Strongville Greenhouses, Strongville, O., on annuals.

Plant Pests and Control Measures: "Troublesome Insects of Ornamental Plants," by Clyde C. Hamilton, associate entomologist, New Jersey agricultural ex-periment station, New Brunswick, and "Destructive Diseases of Ornamental Plants," by Paul E. Tilford, associate pathologist, Ohio agricultural experiment station, Wooster.

JANUARY 21, EVENING.

Dinner and program at Beechwold

Greetings, by John F. Cunningham, dean, college of agriculture, Ohio State University.

"The Southwest Indian Country," illustrated, by John D. Siebenthaler, Siebenthaler, Co. Documents thaler Co., Dayton, O.

JANUARY 22, 9 A. M. Costs, Sales and Office Management.

Discussion leader, L. C. Chadwick.
"Costs Incident to the Production of
Nursery Stock," by John W. Sites, regional observational nurseryman, soil conservation service, U. S. D. A., Zanes-

"Some New Ideas in Selling," by D. F. ipley, Jr., Shipley's Nurseries, Loch Shipley, Jr Raven, Md.

"Office Management," by Clarence O. Siebenthaler, Siebenthaler Co., Dayton, O.

JANUARY 22, 1 P. M. Landscape Gardening.

Discussion leader, Victor H. Ries. "Planting the Front Yard," by M. E. Bottomley, professor of landscape architecture, University of Cincinnati, Cincin-

tecture, University of Cincinnati, Cincinnati, O.

"My Experiences with Broad-leaved Evergreens," by G. Walter Burwell, Burwell Nursery Co., Columbus, O.; A. M. Grube, Lakewood Nursery, Lakewood, O.; George H. Kern, Wyoming Nurseries, Wyoming, O., and F. L. Turner, Berryhill Nursery Co., Springfield, O.

LONG ISLAND MEETING.

The Long Island Nurserymen's Association will hold its tenth annual meeting at the Hotel Huntington, Huntington, Monday, January 13.

No special events are scheduled aside from informal talks at luncheon by the guests, who will include A. B. Buchholz, of the state bureau of plant industry, and Dr. H. B. Knapp, director of the state school of agriculture, at Farmingdale.

G. Bradley Hart, Sec'y.

WASHINGTON NOTES.

The Washington state nurserymen turned out in force at the King and Pierce county meeting of the Associated Farmers. F. J. Bonnell, Bonnell Nursery, was elected secretary and treasurer.

Frank J. Bonnell completed a shipment of three railroad cars of ornamentals to California last week.

The Strander Nursery shipped large quantities of loose holly and holly wreaths throughout the country for Christmas.

Frank Chervenka, Manetti and bulb grower, Sumner, has just returned from California, inspecting his 49-acre bulb tract near Watsonville.

R. R. Williams, Puget Sound Nursery, Tacoma, had a crew making and packing holly wreaths, packed in slatted cedar boxes weighing one and one-half pounds and shipped to all parts of the country. Another attractive container with an assortment of greens was also forwarded.

Approximately 1,500,000 young white pine, spruce and yellow pine trees have been planted by C. C. C. workers in the St. Joe national forest. Idaho.

Approximately 25,000 trees were removed from the Olympic national forest this season in two cutting areas, one near Hoodsport and the other near Quilcene. Trees at yard-

A Complete Line of OREGON-GROWN NURSERY STOCK

Bechtel Crab Cut-leaf Birch Chinese Elm Flowering Cherry Laburnum Vossii Mountain Ash Paul's Scarlet Thorn Prunus Blireana

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ing points were graded and bundled for market according to their size; 4-foot and 6-foot trees are the most popular sizes. Carl B. Neal, supervisor of the Olympic national forest, said, "Cutting of Christmas trees, if properly done, has little or no influence on the timber industry as a whole, since the best Christmas trees are produced on what may be the poorest timber growing land, or land where the growth is too slow to produce timber trees profitably."

Tony Peterson, business agent of the florists' and gardeners' union, was arrested on a charge of attempted malicious destruction of property with throwing tacks on the nursery driveway of the C. P. Malmo Nursery, Seattle. He was released on W. L. Fulmer. \$1,000 bail.

FORESTRY CONFERENCE.

The Washington state forestry conference has been meeting for twenty years, discussing all phases of bettering forestry practice, and at the meeting December 5 took the most drastic and far-reaching action ever undertaken to regulate the industry.

The main object is to compel all

SHRUBS

Ninety-seven acres of choice CONIFERS and BROAD-LEAVED EVERGREENS

including A bor-vitæ, Chamæcyparis, Juniper, Spruce—Koster and Colorado Blue, Mugho Pine, Yews, Laurels, Daphne, Evonymus, Oregon Grape, Mexican

Orange, etc., etc. Write for Catalogue.

ROSES

With incessant orders coming in for roses, we find it necessary to notify our customers that our entire 1940 crop has been sold-thanks to the proved quality and trueness of our plants.

Mountain View Floral Nurseries

Troutdale, Oregon Leading grower since 1900

Pacific Coast Roses

When ordering from Hemet you get only Hemet-grown. They are leaders.

Howard Rose Company Hemet, California





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EVERGREENS :-: Propagators & Growers
141 S. E. 65th Avenue PORTLAND, ORE.

We pay packing costs and shipping costs on lining-out stock to any point in the United States or Canada.

Write today for Wholesale Trade List of evergreens. Many varieties listed.

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A General Line

Combination Carloads to Eastern Points.

Catalogues sent only to firms entitled to Wholesale Prices.

A Wall Chart in Color will accompany requests for catalogues.

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OREGON'S BEST SOURCE OF GOOD ROSES

is

PETERSON & DERING, INC.

Wholesale Rose Growers Scappoose, Oregon

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LINING-OUT STOCK

MANETTI, 3-mm. caliper and up.
NORWAY MAPLE, 3 to 5 feet.
CUTLEAF WEEFING BIRCH, 3 to 5 feet.
SCHWEDLERI MAPLE, 3 to 4 feet.
HAWTHORN, PAUL'S SCARLET, 3 to 5 feet.
WHITE FOR PRICES.

MOTZ BROS. NURSERIES
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ROSEBUSHES

200 Varieties

"Hi-Land Grown-They're Hardy" Send for Trace List
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forest owners throughout the state to make reforestation practice uniform. Each operator cutting timber must leave a block of seed trees to insure future growth, provide adequate fire protection and eventually establish a forestry practice toward a perpetual yield.

A board to regulate cutting is to be made up of nonsalaried men—it is suggested the governor of the state, dean of school of forestry and agriculture, and forest men recommended by the state grange and different lumber organizations.

It was emphasized that a state forestry policy adopted by such a board would govern forestry practice in relation to watershed protection, grazing lands, forest agricultural laws and coördination between publicly and privately owned land.

A radical tax was suggested—a "doing something" along talked of reforms. This recommendation was to halt the practice of lumber operators of liquidating their stands of virgin timber in order to escape years of paying heavy taxes.

A graduate deferred tax payment until the time of harvest was suggested. In the interval, to maintain the tax base, the county would be allowed to borrow money in bonds against the full payment of taxes at time of cutting. Under this method the land would be classified as real property, and the timber on it as personal property.

At the present time the timber is being cut too fast, leaving too wide a gap between forest production and the present forest stand. After the timber is cut, the logged-off land is not worth much for a time and in many instances reverts to the county for tax delinquency. The law as outlined has been carefully thought out after months of study by experts.

Dean Hugo Winkenwerder, of the school of forestry, University of Washington, and president of the forestry conference, feels that it is of paramount importance to keep such lands perpetually productive through uniform protection and practice.

W. L. Fulmer.

THE perennial plant gardens operated by E. P. Fleming have been moved from 81 Vermont avenue to 234 Shelburne road, Asheville, N. C., where he has purchased fourteen acres of ground and a home.

MILTON NURSERY CO.

A. Miller & Sons, Inc.

Milton - Since 1878 - Oregon

Growers of Full Line of General Nursery Stock Specializing in

Cutleaf Weeping and other Birches— Chinese Elms—Flowering Crabs— Hawthorns—European and Oakleaf Mt. Ash—Norway, Schwedler and Sycamore Maples—Oriental Planes— Fruit Tree Seedlings.

> OREGON GRAPE (Mahonia Aquifolium)

Seed selected from plants having crinkly, glossy (English Holly) type foliage.

2-year, X, Field-grown liners, sizes 9 to 12 ins. to 18 to 24 ins., bare roots. 4-year, XX, 24 to 30 ins., B&B or B.R.

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GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings Flowering Ornamental Trees Shade Trees Roses

Grown right and packed right.

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WHOLESALE GROWERS

Fruit, Shade, Flowering Ornamental Trees, Fruit-tree Seedlings, Roses, Etc. Very complete line of quality stock Catalogue sent on request.

Rich & Sons Nursery

FRUIT TREES

Ornamental Trees Shrubs

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CHINESE ELM SEEDLINGS

Undamaged, thoroughly matured, and will be spring dug. Large grades as well as small are available.

> WASHINGTON NURSERIES TOPPENISH, WASH.

Laws and Taxes

DRAFT DEFERMENT.

Urging employers and workers alike not to become "unduly anxious" about occupational deferment of employees from training under the selective service act, C. A. Dykstra, director of selective service, states that productiton of necessary materials will be given preference over man-power requirements as the nation's armed forces are increased.

Mr. Dykstra emphasized that occupational deferments, each of which will be determined on an individual basis, rest with the local draft boards and not with national headquarters.

Employers should not worry about the occupational status of married employees. Mr. Dykstra stated their dependency status will be determined before any consideration is given to occupational deferment. If they are placed in class III (deferred because of dependents), their occupational status will not be considered by the local board.

He suggested that all requests for occupational deferments of registrants employed in key jobs be postponed until such registrants have received questionnaires from the local boards. Each employer will have five days after the questionnaire is mailed in which to file a deferment request. Questionnaires will be sent to the registrants in the order in which their numbers were drawn in the national lottery. In no case will a deferment request be considered until the registrant's questionnaire has been completed and returned to the local board

Because local boards are given the responsibility of deciding which men should be deferred from training because of their civilian jobs, state advisors on occupational deferments have been appointed for all states and are now located in the respective state headquarters of the selective service system. These state advisors will maintain constant contact with local representatives from labor, industry and agriculture in each appeal board area.

Mr. Dykstra suggested that each employer list all registrants in his employ who do not have dependents and determine which cannot be immediately replaced if called for training. For these employees the employer should prepare accurate and concise information on the question in series IV on the registrant's questionnaire and a brief but complete explanatory statement of such employee's work and skill and the estimated time required to make a replacement.

This information should be included in the employer's request for occupational deferment for each such registrant on the claim for deferred classifiation if and when such registrant receives a questionnaire.

Employers desirous of obtaining information concerning deferments may obtain copies of Volume III, Selective Service Regulations, pertaining to classification, from the Superintendent of Documents, Washington, D. C.

WAGES PAID EMPLOYEES IN ARMY NOT TAXED.

According to the ruling made by the internal revenue bureau of the United States Treasury Department, in S.S.T. 406, payments made by an employer to former employees now in military service, to supplement pay received by them from the federal government, do not constitute wages for employment tax purposes.

Some employers have undertaken to pay the difference between army pay and the wage received by an employee before he enlisted or was drafted, during the period that the employee served in the army or navy. Such voluntary payments will not be subject to tax under the social security law. The employment between the company and the individual is held to have been terminated when he enlisted or was called for service.

Similar payment to employees, equivalent to the difference between the normal wages of an employee who was absent from work while serving in the state national guard and the amount paid by the state for such services, was, on the contrary, held to constitute taxable wages under the social security act in S.S.T. 49.

COLORADO QUARANTINE.

In the December 15 issue of the American Nurseryman, on page 19, under the caption, "Colorado Quarantines," I note the paragraph about the alfalfa weevil quarantine and wonder if this statement is clear to the nurseryman who will notice in the original paragraph that the quarantine says, "nursery stock from infested areas." It might be well to cite the entire paragraph of our alfalfa weevil quarantine which composes regulation 2 regarding issuance of certificates, as follows:

"Nursery stock packed in tule may be imported, provided each bale, package or bundle produced in, or shipped from, the infested area, shall bear a certificate when entering the pro-

WRITE FOR 10-DAY TRIAL OFFER on this High Pressure PARAGON SPRAYER



TEST it for yourself. Compare results with what you have been getting from your present sprayer. Use any spray solution or cold water paint. Spray your nursery stock, whitewash your greenhouses, barns and tool sheds, inside and out. Note how easily this Paragon delivers powerful uniform pressure at the nozzle with

little effort at the pump handle. Passes through narrowest aisles without jamming at corners. Automatic agitator prevents solution from settling. We guarantee it never to clog while in use. Ten days trial costs you nothing if not satisfied. If your dealer does not sell the Paragon, mail the coupon today.

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ELM, American, Moline and Vase, up to 4 ins. All transplants.

MAPLE, Norway, up to $3\frac{1}{2}$ ins. Transplants, extra select, spaced 7x7 ft.

POPLAR, Lombardy, up to 2 ins. WILLOWS, Thurlow, up to 3 ins. BARBERRY, Thurbergii, up to 2 to

SPIRÆA, Vanhouttei, up to 5 to 6 ft. APPLE, 2-year.

CHERRY, 1-year.

All of above items can be supplied in carload lots.

Send for list on many other items.

C. M. HOBBS & SONS, INC. Bridgeport, Indiana

Largest Nursery in Indiana. Est. 187

HARDY FRUITS

Haralson Apple
Manchurian Apricots
Red Lake Currant
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Apple and Peach Trees In Carload Lots

A long variety list to select from. We also can offer other Fruit Trees in carload lots, as well as Tennessee Natural Peach Seeds.

If you are interested in either Fruit Trees or Peach Seeds, send us your want lists and we will quote attractive prices.

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Wholesale Growers of

Grapevines, Currants, Gooseberries, Blackberries and Raspberries Let us quote on your requirements

FOSTER NURSERY COMPANY, INC.

69 Orchard St.

Fredonia, N. Y.

GRAPEVINES, CURRANTS, GOOSEBERRIES and BERRY PLANTS

GROWING for the WHOLESALE TRADE since 1890. The QUALITY of our PLANTS will please your most critical customers. Get our attractive quotations before placing your order.

The F. E. Schifferli & Son Nurseries Fredonia, N. Y.

Please mention the AMERICAN NURSERYMAN when writing advertisers tected area, establishing the fact that all materials in the shipment have been fumigated for a period of one hour for alfalfa weevil in an air-tight inclosure, subsequent to being boxed, baled or packed for shipment, with cyanide of sodium or cyanide of potassium at the rate of one ounce to each 100 cubic feet of space."

F. Herbert Gates, State Entomologist.

DINE MAYOR AT HOUSTON.

The Houston Landscape and Nurserymen's Association lost no time in showing its appreciation to the newly elected mayor of Houston, Tex., by honoring Neal Pickett and his wife at a dinner party. The final election for the city was held December 9, and soon after the final returns were filed at 7 p. m. and the mayor-elect and his wife were rejoicing, they joined the party of nurserymen and landscape men at the Original Mexican restaurant.

Through the able planning of Dick Griffing, chairman of arrangements, and his committee, the dinner party was scheduled with Mr. and Mrs. Pickett as guests of honor. The Christmas motif of decorations was carried out throughout the dining room, where fifty guests were seated for the affair.

After the dinner, Mr. Pickett was introduced to the group and thanked the members for their consistent effort, in connection with the policies of his campaign for mayor of Houston, to build more beauty in the city. He referred to the value of beauty to the younger generation in creating better citizens and as making Houston people more proud of their city.

Mr. Pickett acknowledged the helpful information which the association had furnished him in regard to what other cities had accomplished in landscaping, which had helped him to understand the greater need for developments along this line at Houston. He asked for a meeting with the officers to discuss further plans after he took office January 1.

After the speeches, the floor was cleared and dancing followed for several hours.

This dinner party represented the annual Christmas entertainment of the association. The monthly meeting was set for December 18, at the home of Mr. and Mrs. T. B. Foster.

Wilma Gunter.



TREES TO BE BEAUTIFUL AND HEALTHY MUST BE FED

The Fertigator
Wet Method will
carry the necessary
food elements to
the starving root
system — without
delay—in an easy
practical way.

The Fertigator operates on city water pressure—all you need is a garden hose. It handles any non-soluble fertilizer.

Now made in two sizes—a large size for private estates and professional tree men and a junior size for home use. Write today for free descriptive brochure with new low prices.

THE FERTIGATOR CO.

705 W. South St., Kalamazoo, Mich.

BALL AND PLANT CARRIER

Weighs 47 lbs., all-weld, underslung construction. Will carry up to 800 lbs.—attachment for two helpers for heavy trees. No lifting to load or unload. Unexcelled for wheeling plants out of nursery rows, flats of plants into the field, for stone and other heavy material. Takes big plants across lawns, over stepping stones and into narrow places without injury to property. One man can wheel out more weight in a day than three or four could carry out. Fine for landscapers. List of users on request. Patented.

Price, \$22.50 F. O. B.

Sunnyview Nurseries

PEACH PITS

Our Pits Compare Favorably With the Best

HOGANSVILLE NURSERIES
HOGANSVILLE, GEORGIA

ROSE REGISTRATIONS.

The American Rose Society's registration committee has approved applications for registration of the following roses. Notice of these registrations has been sent to rose organizations in foreign countries and trade

If no objections are raised before January 17, 1941, the registration of these names will become permanent as of that date, states R. Marion Hatton,

secretary:

of that date, states R. Marion Hatton, secretary:

Grand Duchess Charlotte. Hybrid tea. Originated by Ketten Bros., Luxembourg, no parentage given. To be introduced by Conard-Pyle Co., West Grove, Pa., 1941 or 1942. The plant is described as upright and vigorous, with normal to large leathery foliage, 4-inch, loosely arranged flowers, with thirty petals. Color is pomegranate to vivid ox-blood red. Carnation fragrance.

D. T. Poulsen, Improved. Hybrid polyantha. Originated by Van der Vis & Co., Boskoop, Holand. Introduced by Conard-Pyle Co., 1940. Paragrowth and bushy, with 2%-inch, cupped flowers of vivid cherry-red; thirty to thirty-five petals. Blooms in clusters, with vegetative fragrance. Poulsen's Copper. Hybrid polyantha. A seedling of Ellen Poulsen x Mrs. G. A. Van Rossem, originated by D. T. Poulsen, Copenhagen, Denmark. Introduced by Conard-Pyle Co., 1940. Two-foot growth, with long, narrow foliage. Flowers are flat, 2%-inch with twenty to twenty-five petals, orange-pink in color, blooming singly in candelabra, with sweet, cloverlike fragrance. Midget. Miniature. A seedling of Ellen Poulsen x Tom Thumb, originated by Conard-Pyle Co., 1940. Plant described as small and dwarf, with flat flowers five-eighths to seven-eighths inches in diameter, twenty petals. Carnine-red color. 1940. Plant described as small and dwarf, with flat flowers five-eighths to seven-eighths inches in diameter, twenty petals. Carnine-red color. 1940. Plant described as mall and dwarf, with flat flowers were eighths to be even-eighths inches in diameter, twenty petals. Carnine-red color. 1940. Plant described as vigorous, with leathery foliage; 2½ to 3-inch cupped flowers of cerise-red, with thirty to thirty-five petals, slight fragrance. Blooms in clusters.

Little Mins Muffet. Hybrid polyantha. A seedling of Else Poulsen x Étoile de Hollande, originated by E. B. LeGrice, North Walsham, England. Introduced by Conard-Pyle Co., 1940. Plant described as vigorous, with leathery foliage, 4-inch cupped flowers, with leathery foliage, 4-

red. Sweet Briar fragrance. Blooms several together.
Reveille. Hybrid tea. A seedling of Kidwai x Goldenes Maina. Originated by Dr. J. H. Nicolas. To be introduced by Jackson & Perkins Co., 1941. Plant described as upright, with dark, medium-size foliage and 4 to 4½-inch bomb-shaped flowers, with forty to fifty petals. Color is light salmonbuff, flushed deeper pink in center. Slight fragrance. Blooms singly.
Climbing Cecil. Climbing hybrid tea. A sport of Cecil discovered by C. W. Chaffin, Ontario, Cal. To be introduced by Armstrong Nurseries, Ontario, Cal., 1941. Described as a vigorous climber, with glossy, light green foliage. Hardiness untested. Continuous bloomer. Star-shaped flowers three to three and one-half inches across, with five petals of bright lemon-yellow. Moderate fragrance. Blooms singly and several together. Climbing Sequoia, Climbing hybrid tea. A sport of Sequoia discovered by H. C. Swim, Ontario, Cal. To be introduced by Armstrong Nurseries, 1941. Described as a vigorous climber, with glossy foliage. Hardiness untested. Blooms in

May, June and July. Has 3 to 3½-inch full flowers, with sixty or more petals. Color copperyorange. Moderate fragrance. Blooms singly. Gay Mood. Large-flowering climber. A cross of Joanna Hill x Sanguinaire. Originated by Dr. W. E. Lammerts, Ontario, Cal. To be introduced by Armstrong Nurseries in 1941. Described as a xigorous climber, with glossy, medium-size foliage. Continuous bloomer and probably semihardy. Has 3½ to 4-inch flat flowers, with fifteen to twenty-five petals. Color rosepink. Moderate fragrance. Blooms singly.

SOUTHWESTERN NEWS.

Mrs. Will Griesa, Mount Hope Nurseries, Lawrence, Kan., is recuperating in a Kansas City hospital from a major operation.

The Shawnee Nurseries, Shawnee, Kan., have built a new greenhouse adjoining their offices. It will be used for propagating purposes. This is part of an extensive building program carried on by this firm in the past year, during which it has erected an office and storage buildings.

The fame of Clayton Bunting, state senator-elect, of Buntings' Nurseries, Selbyville, Del., has spread to the middle west. This came about by his lucky shot (he says it was skill) which killed three ducks on the wing when he was hunting recently. The Selbyville paper gave "Clate" a fine write-up and published his picture in recognition of his feat.

"Genial Joe" Whelan, wholesale representative of the Shenandoah Nurseries, Shenandoah, Ia., has moved to Glen Ellyn, Ill., to be nearer the center of his territory.

The Cook Gardens, Ottawa, Kan., were low bidders on a roadside improvement project in Marshall county, Kansas, in December.

David Lake and his bride moved early in December into their fine new home, which is located on the highway two miles east of Shenandoah, Ia. He has been in the sales organization of the Shenandoah Nurseries since his graduation from Iowa State College, two years ago.

E. S. Welch, president, and Harold S. Welch, vice-president, of Mount Arbor Nurseries, Shenandoah, Ia., were in Chicago on business the middle of December.

Cliff Burr, of C. R. Burr & Co., Manchester, Conn., returned recently from a trip to the Pacific coast and to Texas to look over the rose situation. He is planning to spend the winter in Florida.

Henry C. Chase, of the Chase Nursery Co., Chase, Ala., is spending several months at his winter home in Florida. The office has been left in charge of H. H. Chase and Joseph Falt, who report an active trade during the past few weeks in spite of Uncle Henry's absence.

The Heart of America Nursery & Landscape Co., Kansas City, Mo., is developing a large estate for an oil man near Burlington, Kan. If present plans are carried out, several years will be required to complete the planting.

John Res, of Sassenheim, and Jac Lefeber, of Lisse, Holland, who are well known to the nurserymen all over the country, visited friends in several midwestern states on their way east recently. They have been unable to return to their country since the German invasion last May, but they have heard that their families are all right.

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ST. LOUIS NEWS.

The rains early in December were sufficient to make planting conditions almost ideal. Practically the entire month had little freezing weather, and the landscape and nurserymen in this area took full advantage of what, from earlier indications. was going to be an extremely short planting season. Earlier reports indicated a poor fall for the nurseryman, but the past few weeks of ideal weather have stimulated sales. Present indications point to a longer season than normal, as digging and planting usually cease about this time, when freezing sets in.

The use of balled evergreens from the nursery for interior use as Christmas trees, later to be planted outdoors, has been gaining in popularity in recent years. This season it produced considerable business for nurserymen. Almost every conceivable type of conifer was used. Firs and spruces, especially Black Hills, seem to be the most popular, but Scotch and Austrian pines are used, as well as blue spruce. One nurseryman had an arrangement whereby he furnished a suitable container for the tree, delivered and set it up and, at the end of the holiday season, planted the tree and took back his container, to be used next season. This is a field in which the local nurserymen have not been quite active enough for their own good. The contention has always been that there is not enough of this type of business to make it worth their while, but from the increase in the past few seasons, it is evident that this business could be worked up to a point where it would be an important item. Many of the nurserymen with sales lots have done an excellent business in seasonal merchandise. such as wreaths, holly boughs, grave blankets and cut trees. While the season is extremely short on these items, the turnover is large enough to make it well worth while. This type of trade also brings new faces into the establishment, many of whom will later be customers for the more staple items.

The Houlihan Nursery, Creve Coeur, Mo., reports completion of all the planting on the two large housing projects under federal control in this area. These projects are the Lucas-Hunt and the Manhasset projects. The general contract for

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THE GARDEN SHOP, INC., 4819 Mission Road, Kansas City, Kan.

the landscape work was let to the Shields Shade Tree Co.

The Missouri State Nurserymen's Association will meet at the Muehle-bach hotel, at Kansas City, Mo., on the afternoon of January 8. All nurserymen in the state are invited to attend this meeting.

The Greater St. Louis Landscape and Nurserymen's Association met last month at the office of Charles W. Fullgraf, at Clayton. Practically the entire meeting was devoted to the Ozark garden exhibit, which this organization will sponsor at the St.

Louis flower show next March. This exhibit will cover an area of over 7,500 square feet and will feature an Ozark log cabin with other features of the Ozark mountains. Mr. Fullgraf is chairman of the committee staging the exhibit. The next meeting of this organization will be held at Mr. Fullgraf's office, January 13. Eugene Waldbart, of the Waldbart & Sons Nursery Co., will be the host for the evening and Mr. Dinsmore will give a talk. All in the trade are cordially invited to attend any of these meetings. C. F. G.

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OBITUARY.

L. M. Barr.

Funeral services were held December 19 for L. M. Barr, Dayton, O., who died at his home after a short illness. Mr. Barr was born in Loudoun county, Virginia, seventy-nine years ago and went with his family to Ohio in 1865, settling at Dayton in 1880, where he had been in the nursery business since. Nine years later he married Anna Shawen, and the couple celebrated their golden wedding anniversary in 1939.

Surviving Mr. Barr are his widow, one sister, Mrs. Blanche Wright; one brother, George W. Barr, Jr., and several nephews and nieces.

NEW POT FACTORY.

Enlarging the line of Cloverset pots and greatly reducing the cost, Ernest Haysler & Son, Kansas City, Mo., are now making their pots in a recently completed factory of two floors, 40x90 feet, equipped with heavy Bliss machinery, much faster in operation so that the pots are made much cheaper than before.

Last year the firm sold 750,000 of the Cloverset pots, and orders booked are now ahead of a year ago. Among current orders is one for a carload of 39,000 pots from Jackson & Perkins Co., which sold about four carloads last year. Other distributors are Vaughan's Seed Store, Mount Arbor Nurseries, Lake's Shenandoah Nurseries and C. R. Burr & Co.

AT the meeting of the middle Atlantic region of the American Rock Garden Society, which was held at Hotel McAlpin, New York, December 18, Don Richardson, of the F. & F. Nurseries, Springfield, N. J., was the speaker.

INCORPORATION of Growers' Hardy Stock Nurseries at Monmouth, Me., to "provide fruit nurssery stock of a hardy type deemed by the patrons to be more suitable for Maine conditions," was recorded at the Kennebec registry of deeds December 13. Officers are: W. J. Ricker, president; L. C. Berry, vice-president; Arthur N. Blanchard, in addition, Seward P. Stearns, L. S. Russell, G. W. Roberts and Harry W. Brack, trustees.

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